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The Safe Issue

A multitude of
safe articles
starting on
page 18.

On The Cover...



With a modular design concept, the Gunn Gard by CSS offers a unique approach to gun safe assembly and delivery.

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TNL: Subscribe to the CD-ROM

One of the most time consuming and difficult projects we've ever done here at *The National Locksmith* was to put years of our back issues on CD ROM. If we had known that it would take us over a year of effort and hard disk straining work to do, we might never have started.

But the good news is that we went into the project not knowing! So we did it, and you've known about it for some time. Now, I'm pleased to report that we'll shortly have an update to our back issues CD. Here's how it will work.

If you already own TNL Back Issues on CD, then you have a 5 CD set. On that set are the years of 1988 through 1998. We'll be updating you by providing 1999 and 2000 issues on CD.

Now I know that there are a lot of you who have been waiting for this update. Remain calm! We'll have the update available during the summer, and will advertise it here as well as bring it to ALOA. Plus we'll post its availability in the Locksmith Forums at TheNationalLocksmith.com. We'll even add it to our online store there.

To make things really interesting, we're planning on allowing you to actually subscribe to the CD version of *The National Locksmith*. Starting in a few months, when you receive your magazine renewal form, you'll find a place to also sign up for an annual CD containing the previous year's issues.

Thus, sooner or later, when you receive your renewal form to the magazine, you'll be able to sign up for the delivered issue as usual, but you'll also be able to pre-order the annual CD update. After the 99-00 CD, updates will be created and shipped annually.

Having your favorite magazine on CD is a huge advantage. First, it allows you to get rid of paper copies. Second, each CD is completely indexed for easy information look up. Third, all the issues since 1995 are completely key word searchable.

Thus, when you need information, there's no faster method of data look up and retrieval. Even before the update I am speaking of, our issues on CD set is comprised of over 10,000 pages of data.

I'll let you know when the 1999-2000 update is available. And when we offer it to you, be sure to subscribe to the CD version as well as issue delivery. One word of caution, you'll be able to sign up for issue delivery without subscribing to the CD version. But not the other way around.

One of these days there may be no need for paper and EVERYTHING will be electronic. But until that day, *The National Locksmith* is right on the cutting edge, offering you the finest information in a timely fashion!



Have questions? Want free technical help?
Free Locksmith Forums!
www.TheNationalLocksmith.com

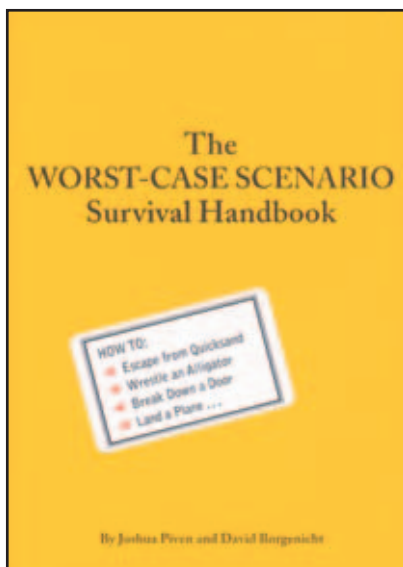
Marc Goldberg
Publisher

Mango's Message

Danger! It can happen at any time: You are on the way to a service call. Upon arrival you step out of your service vehicle smack into a pool of quicksand! Or, you find yourself in the middle of a sword fight! Or, you are being chased by killer bees or a charging bull! What do you do?

These are times when you say to yourself, "If only I had an instruction manual on how to get out of this predicament". Well, lucky for you, there is one. No, this isn't a new book offering by *The National Locksmith*, but "*The Worst-Case Scenario Survival Handbook*" by Chronicle Books, has how-to, step-by-step instructions on everything you need to know when dealing with 40 dicey situations, such as:

How to Escape from Quicksand; How to Break into a Car; How to Hotwire a Car; How to Escape from a Bear; How to Escape from Killer Bees; How to Win a Sword Fight; How to Maneuver on Top of a Moving Train and Get Inside; How to Leap from a Motorcycle to a Car; How to Deliver a Baby in a Taxicab; How to Treat a Bullet or Knife Wound; How to Survive Adrift at Sea; How to Survive If Your Parachute Fails to Open; How to Get to the Surface If Your Scuba Tank Runs out of Air, among other must know survival techniques.



I couldn't help but be intrigued as to just what this little survival guide had to say. Apparently, I'm not the only one. It has been reviewed by: Time Magazine, The Washington Post, The New York Times, Travel & Leisure, The San Francisco Chronicle, Boston.com, The Chicago Tribune, The Motley Fool, The Denver Post and others. Not to mention that it was also on the New York Times Best Sellers List.

If you are anything like me, as you gleaned the partial table of contents list, the first thing that piqued your interest was: How to Break into a Car and How to Hotwire a Car. As I flipped to page 24, sure enough, the following examples were given on How to Break Into a Car with a Hanger; How to Break Into a Car with a SlimJim; How to Pick a Car Lock and How to Hotwire a Car.

HOW TO BREAK INTO A CAR

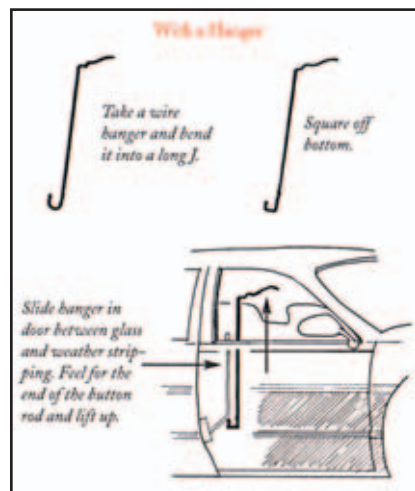
Most cars that are more than ten years old have vertical, push-button locks. These are locks that come straight out of the top of the car door and have rods that are set vertically inside the door. These locks can be easily opened with a wire hanger or a SlimJim, or picked, as described below. Newer cars have horizontal locks, which emerge from the side of the car door and are attached to horizontal lock rods. These are more difficult to manipulate

Worst-Case Scenario

without a special tool, but can also be picked.

How to Break into a Car with a Hanger

1. Take a wire hanger and bend it into a long J.



2. Square off the bottom of the J so the square is 1-1/2 to 2 inches wide (see illustration).

3. Slide the hanger into the door, between the window and the weather stripping. Open the door by feel and by trial and error. Feel for the end of the button rod and when you have it, pull it up to open the lock.

How to Break into a Car with a SlimJim

1. A SlimJim is a

thin piece of spring steel with a notch in one side, which makes it easy to pull the lock rod up. They can be purchased at most automotive supply stores.

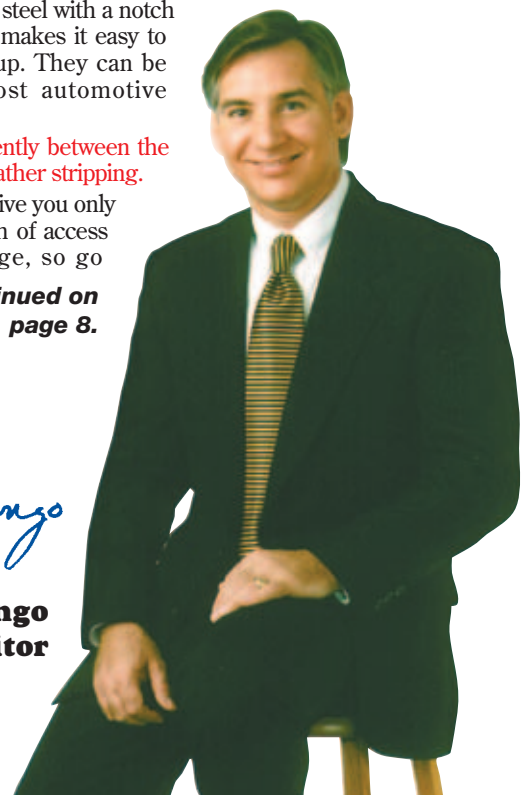
Slide the tool gently between the window and the weather stripping.

Some cars will give you only a quarter of an inch of access to the lock linkage, so go

Continued on page 8.

Greg Mango

Greg Mango
Editor



Mango's Message

Continued from page 6

slowly and be patient.

2. Do not jerk the tool trying to find the lock rod. This can break the lock linkage and on auto locks it can easily rip the wires in the door.

3. Move the tool back and forth until it grabs the lock rod and then gently move it until the lock flips over.

How to Pick a Car Lock

1. You will need two tools—one to manipulate the pins or wafers inside the lock core and one to turn the cylinder.

You can use a small Allen wrench to turn the lock and a long bobby pin to move the pins and wafers. Keep in mind that many car locks are harder to pick than door locks. They often have a small shutter that covers and protects the lock, and this can make the process more difficult.

2. While the bobby pin is in the lock, exert constant and light turning pressure with the wrench.

This is the only way to discern if the pins or wafers—which line up with the notches and grooves in a key—are lined up correctly. Most locks have five pins.

3. Move the bobby pin to manipulate the pins or wafers until you feel the lock turn smoothly.

Alternate Method

Use a key from a different car from the same manufacturer.

There are surprisingly few lock variations, and the alien key may just work.

Be Aware

We of course assume you are seeking to enter your own car.

HOW TO HOT-WIRE A CAR

Hot-wiring a car without the owner's permission is illegal, except in repossessions. Hot-wiring can be dangerous; there is a risk of electrical shock. Hot-wiring will not work on all cars, particularly cars with security devices. Some "kill switches" can prevent hot-wiring.

1. Open the hood.

2. Locate the coil wire (it is red).

To find it, follow the plug wires, which lead to the coil wire. The plug and coil wires are located at the rear of the engine on most V-8's. On six-cylinder engines, the wires are on the left side near the center of the engine, and on four-cylinder engines, they are located on the right side near the center of the engine.

3. Run a wire from the positive (+) side of the battery to the positive side of the coil, or the red wire that goes to the coil.

This step gives power to the dash, and the car will not run unless it is performed first.

4. Locate the starter solenoid.

On most GM cars, it is on the starter. On Fords, it is located on the left-side (passenger-side) fender well.

An easy way to find it is to follow the positive battery cable. You will see a small wire and the positive battery cable. Cross the two with a screwdriver or pliers.

This cranks the engine.

5. If the car has a standard transmission, make sure it is in

neutral and the parking brake is on.

If it has an automatic transmission, make sure it is in park.

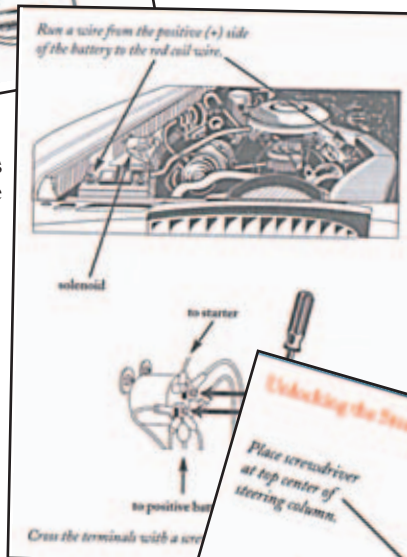
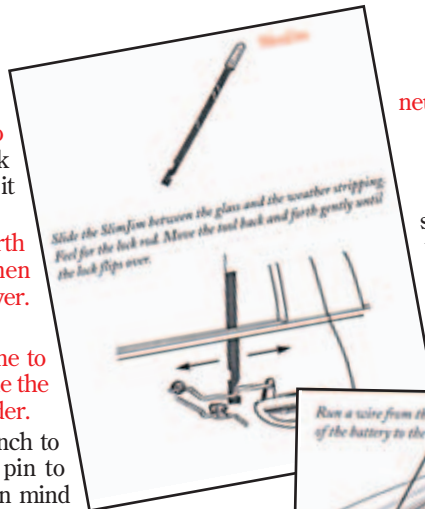
6. Unlock the steering wheel using a flat blade screwdriver.

Take the screwdriver and place it at the top center of the steering column. Push the screwdriver between the steering wheel and the column. Push the locking pin away from the wheel. Be very firm when pushing the pin; it will not break.

Although the examples given are limited in scope, this is exactly the kind of material you would expect to obtain from one of those online Soldier of Fortune publishers along with: How to Build a Pipe Bomb or How to Make Your Mother-In-Law Vanish Without a Trace. (Hmm, I'll have to look into that one.)

Actually, this book was purchased at **WAL★MART!** And to add insult to injury, they charged \$10.88 when the price sticker on the back of the book was \$10.46. I believe *"The Worst-Case Scenario Survival Handbook, Vol. II,"* should include: How to Survive the **WAL★MART** Monopoly!

TNL



MAY 2001

Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

In the March 2000, "Computer Software Programs" feature, we inadvertently printed the wrong software screen shots with the Blackhawk release. The following is the corrected version.

Manufacturer: Blackhawk Products

Locksmith Price: \$49/year

Purpose of Product: Lockcodes is a full code program accessible on the Web through your favorite internet browser. It works with any type of computer or operating system, such as the PC, Mac or Linux.



Features: Lockcodes is easy to run. Select the space/depth you want and type in the code number. On the next screen, choose from the list of series, or select a filter to have a smaller list. Then you'll see the cuts, the blanks to

use, and your choice of cutting information (measurements, depth keys, 1200 cards, Framon, Curtis, A-1, Exacta, Codemax, and HPC Punch). You can even print code cards. All



updates are done automatically; there are no discs to worry about. The price is less than you would pay for the updates on most code programs.



Demo Available: Yes (at www.lockcodes.com/demo/)

Web site:
www.lockcodes.com

E-mail:
staff@blackhawk7.com

Phone: (970) 882-7191

Fax: (970) 882-7228

Pricing Policies and Procedures

This letter is regarding Dale Libby's article concerning pricing policies and procedures in the February 2001 issue.

Before my wife and I retired, we taught a lot of locksmith classes for several companies and locksmith



organizations. We are both CML rated by ALOA. After each class we offered to stay as long as students wanted, to answer any question related to the locksmith profession. The most asked question is, "How do you set your prices". Of course, my old college classes in cost accounting kicked in at first, but then I realized the classroom theories are better suited to a large and medium size business, than to small mostly mom and pop businesses.

Your article contains some good points. I would like to comment on some things that we found were helpful in our businesses. We applied our ideas and training to other businesses in addition to our locksmith businesses.

I agree, no "average price lists" whether mean, median or mode, are helpful. Prices charged by a locksmith should be the same in every local throughout the country for labor. Price differences for locations should reflect additional costs for travel time, shipping costs, etc., not the population of the area. We had our last business in a suburb, but because of traffic congestion and other things

The National Locksmith
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Streamwood, IL 60107
Attn: Editor

Continued on page 12

Continued from page 10

that increased travel time, our prices were as high as those in the city proper.

Prices in most areas of business are based on price leaders. That is, large companies with many outlets that lead in setting prices. Everyone else follows as closely as possible because of the competition. We have found no price leaders in locksmith or safe service work.

You state that the customer will use "Price as the determined factor." That, "They will find the cheapest...". Many times this is true, but sometimes the high bidder gets the job. We have found that in the service business, you can get the job by impressing the customer with quality, warranty, availability, follow up service, promptness and KNOWLEDGE. In one hospital bid, we were \$5,000 over the other bidders and got the job. We were able to show the customer we could master key the entire hospital without disrupting the day-to-day operation. Our reputation, commitment to education and professionalism, as well as our standing in the business community, helped us to get this bid over several bidders. Have a price list for standard services and charge the same price to everyone, be consistent in pricing. Professional attitude and appearance are necessary to support higher prices. Of course, professionalism is a whole other topic.

You are correct in stating a safe opening (or any service job) should have the price set in stone before the work is done. This is difficult to do at times, but with enough experience one can pretty accurately predict the time and equipment and tools needed for a particular job.

Most of our students would be surprised when we told them to charge more for a big job than for a small job if pricing per cylinder rekeyed or hourly charge. It takes more time to do a large job. More time is consumed by moving your truck or equipment or just navigating halls and factories, etc.

I always itemized my bills very carefully. I would list all the work to be done but not individual prices for each thing on the list, only a total price. This gives the customer less to question. On jobs over \$500, we always insisted on a signed approval of the work stating the price, expected

completion date and method of payment, including our weasel clauses.

There are volumes of books that attempt to tell you how to price based on costs, etc. They are usually much too complicated for the locksmith or safe man. We found that many locksmiths, especially one or two man or mom and pop locksmiths, did not know how much to charge and were too low in their prices because they were afraid the business would go to a competitor down the street.

Most students would think that if their net profit at the end of the year was \$30,000, they made \$30,000.

It was difficult to convince them this is not true. If that locksmith could have made \$28,000 working for another locksmith, he only made \$2,000 profit, or return on his investment. If he had \$20,000 in a van and \$6,000 in tools and equipment and \$1,000 in stock, he had \$27,000 of his money invested. The \$2,000 profit would reflect a return of only about 7% on his investment, not to mention all the extra time he spent doing the books, cleaning the truck, etc. He or she would have been just as well off taking the other job and investing his \$27,000 in bonds or somewhere else and had less aggravation and probably fewer hours to work.

To properly set your prices, you must know all your costs and what you must take in to cover those costs and the income you think you deserve for your training and knowledge. I always liked making above average earnings so our prices were considered high. We kept new trucks, new equipment and our place of business looking professional and clean. We constantly attended training sessions and got the high prices we demanded because of our professionalism. We never even asked what others were charging. We charged based on what we needed to have for a fair return on our investment and the labor we put in the business. This was easy to explain to our commercial customers. Most of them understood what it takes to run a business and do it right. They also like the permanence and warranty of a professional apparently in business for the long haul.

Most locksmiths we talked with had not considered how they were going to replace worn out equipment and trucks, and never had enough

credit or cash on hand to bid on big jobs. They could not afford to pay for the goods and equipment while waiting on their payment from the customer. Your return on your investment should cover these costs, not what you need for your standard (which must be practical) of living.

I could go on forever, but will spare you. I just wanted to comment on a subject that I think does not get enough attention. Most small locksmith and safe men should be making more money and could be if they priced correctly and kept their professionalism at a level to support those prices.

Thank you for your indulgence,
Steve D. Albright, CML

P.S. We were in the burglar alarm business and found the return on investment very poor because the very large companies advertised such low prices and gave their work away while only paying their service personnel \$10 per hour. They had difficulty finding people at such a low wage, but did not care if they had a big turn over. Most of the ones we observed did very poor work and warranty was a dirty word to most. In this business there are price leaders - the large companies.

Information Highway

This is in reply to Francisco Fuentes letter in the March issue who writes, "Ours is a Sad Industry... We need Help."

In response to your letter about how hard it is to get locks or lock information, compared to getting help for your vast array of computers. Maybe you need to hire yourself a good locksmith. Someone who knows how to research and phone chase parts. You know, we locksmiths got all these pesky old books and periodicals that we've collected over time that for some reason or another, keep coming through for us. If it were as easy as you want it to be, they would be pedaling my true calling and vocation at the Home Depot's.

Some of us older (46) lock dudes seem to find what we need when we and our customers need it.

Let us know what area you are working so we can pick up some new business when you pull the plug on locksmithing and take up computers. We'll miss ya!



Howard Fulks
E-mail

Security Café

**DROP IN FOR
TOOLS, TECHNOLOGY
& EQUIPMENT**

Indoor Keypad from DoorKing



DoorKing has introduced a new low cost digital keypad to its line of access control products. The Model 1509 is designed for indoor applications only and easily mounts into a single-gang electrical box. The keypad is powered from 12 to 24 volts AC or DC power and draws only 10 mA in standby mode. The internal form C dry contact relay can be used to control a variety of electric strikes or magnetic locks. The keypad is user programmable with a single four-digit entry code, and can also be programmed with a single four digit "hold" code.

Stainless Steel Safes from A&B



A&B Safe Corporation has a new line of stainless steel, composite, burglary and fire resistant safes. The line provides 10 models that will fill most customer requirements. Two of the models will have a depository draw, which will lock after the deposit, thus keeping the contents secure.

InJig Mort Mortise Jig from PRO-LOK

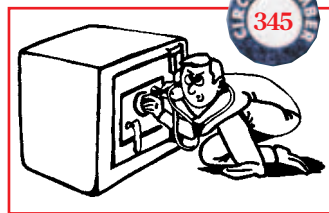
This tool cuts a lock mortise in under 5-minutes. The new mortise jig incorporates unique Quick Change Cutters, which allow the cutters to be changed in seconds, without removing the jig from the door. This means that both



the full lock body and the faceplate can be cut out with ease. The mortise hole is automatically centered on the door and accurate results are obtained every time. No other combination of tools can produce such fast and accurate mortise installations. The jig and its precision cutters will cut a mortise in hard wood, soft wood, composite doors and with the use of a special cutter, aluminum doors as well, all in under five minutes.

The Baffler

Locksmiths can sell customers on upgrading safe combination locks by fitting a safe with The Baffler. According to the



manufacturer, The Baffler will baffle many manual manipulation methods. The unit fits most 6730 type 3 wheel locks and uses an existing mounting screw hole. No drilling or tapping is required for installation.

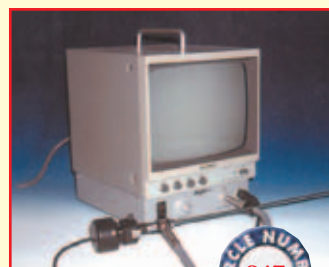
Marks USA Adds Flexibility to Survivor Lever Locksets

Marks USA has enhanced the "Survivor" cylindrical locksets, enabling them to operate in a greater range of door conditions. Installation in older, poorly maintained doors



AngioLaz Borescope System

The MVBS-1m bore-scopic system from AngioLaz converts existing flexible or rigid borescopes to a video system, which allows for images from hard-to-reach locations by separating the scope from the viewing function, enabling simultaneous viewing by several locksmiths. The unit consists of a small remote head video camera and coupler, which attaches with a single cable to the base unit. The handled base unit is a 9-inch Sony monochrome monitor with a bright illuminator. The system is completely wired, requiring only one power connection. It also has connections for recording, printing or digitizing the image for documentation. The remote head camera features mirror-reverse to use with scopes, which have mirror tubes or detachable prisms. The focusable video coupler fits 95% of rigid or flexible borescopes, the manufacturer says. Color applications are also available.



or hollow metal doors with insufficient lock reinforcement can now be done without requiring sensitive adjustments. The lockset, which is self-adjusting within 1-5/8" to 1-7/8" door thickness, installs with just two #10 through bolts. Also available are models for doors up to 2-1/4" thickness, and spacer kits for doors of 1-3/8" thickness. The "Survivor" series is available in both the "American" and the more rounded "Crescent" style levers. Both feature the "Clutch" mechanism in ANSI grades one and two, and are available with either conventional or IC core cylinders.

Indiana Cash Drawer Company Drop Drawer



The new Indiana Drop Drawer offers close to 100

cubic inches of secure, lockable large bill and check storage. The separate media area is keyed differently from the main cash drawer allowing for manager only access while providing additional cashier security. The same industry leading features and value behind the SLD cash drawer line was utilized in developing their newest innovation, the Drop Drawer. Both product lines provide a 2-year warranty and a 2-million cycle test rating. Best of all, the overall dimensions of the Drop Drawer remain at the popular size of 21" deep x 20" wide x 4.125" high and is available in all standard colors or painted to your specification. Use your standard media storage space as it was intended and keep your large bills and checks secure with manager only access.

SECURITY CAFÉ

Medeco SiteLine Expansion Board

The Medeco SiteLine Expansion Board is now available. The Expansion Board features clearly marked connections for inputs, outputs and auxiliary connections to reduce wiring time and errors on Single Door Controller installations. With the Expansion Board, installing the Single Door Controller consists of three easy steps: connecting the power source to the "Power In" terminal, con-

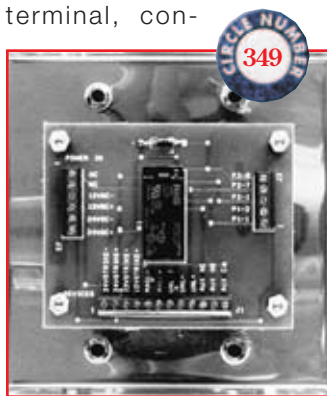
necting the selected Medeco door hardware to the "Devices" terminal and connecting a provided cable to the SiteLine Single Door Controller. Compatible power sources include the Medeco 12-Volt AC Transformer and any Medeco 12-volt or 24-volt DC PowerModule.

Compatible electrical locks include any Medeco 12-volt or 24-volt DC electric strike and the Medeco MagLock and UnLatch. The Expansion Board is also available as part of the SiteLine Modular Kit, which provides all equipment for SiteLine installations along with a choice of Medeco 12-volt door hardware. The kit includes: the SiteLine Expansion Board; a 12-volt, four-amp hour battery; door kit; 12-volt and one-amp PowerModule with wiring kit.

Master Lock's Sleek New Titanium-Reinforced Padlocks

Master lock has just reinvented the padlock. It is introducing an innovative patented titanium-reinforced padlock that is not only as tough and dependable as Master Lock's traditional locks, it's also sleek, attractive and contemporary in design. The high-performance Titanium Series locks, which will be in stores across the

country in July, are unlike any other currently on the market, both in looks as well as features consumers will appreciate. Some features include: Strength, they're the first locks to use titanium, recognized for adding strength and durability to precision products without adding size or weight; Security, the hardened-steel shrouded shackle is bolt-cutter tough. Titanium Series locks accommodate the same home/yard, automotive and sportsmen uses as traditional padlocks, and fit most hasps, cables and chains; Weatherability, the Titanium Series locks are made from stainless steel and other non-corrosive components. When not in use, a weather-tough patented sliding keyway cover keeps dirt from jamming the locking mechanism.



15 Minute Safe Opening

This book deals exclusively with round head lift out doors. Shows five ways to open a Major; three ways to find the Dog Pin on a Major; four ways to open a Star; four ways to open a LaGuard style round head.

CLICK HERE TO LEARN MORE



Hotel and Dormitory Safe from Perma-Vault



Perma-Vault Safe Company has three safe models targeted for hotel rooms, dormitories or guestrooms that can store laptops and other valuables. The units have padded inserts to protect the contents. The first model has a Medeco high-security lock, the second has a Medeco interchangeable core lock and the third has an electronic LCD digital lock. Keyed units can be masterkeyed, keyed alike or keyed different. The electronic unit allows the user to set their own locking code, which is deleted each time the safe is opened. The safe, which measures 10" high, 12" wide and 15" deep, is available with an optional 15" pedestal. Pre-

drilled holes in the safe enable the user to bolt the safe to any structurally sound surface.

Visonic Prox Reader with Usable Keypad

Visonic Ltd. has introduced the Tag-In-A-Bag proximity reader and keypad. Tag-In-A-Bag is a compact, integrated access system consisting of a controller, proximity reader and a fully operational key-pad - all in an attractive



weatherproof housing. The Tag-In-A-Bag also accepts an additional reader (model RDR-1). For added security, tag plus PIN code operation can be selected. Tag-In-A-Bag accepts up to 250 users, each set includes 10 free Tags and a Reader/Keypad. Installation of Tag-In-A-Bag is fast and easy; it incorporates inputs for Request to Exit, Door position, Tamper, Auxiliary reader, as well as outputs for Lock, Door Ajar, Forced Door, Auxiliary and Panic.

Safe Hauling Trailer from Tiger Line

Tiger Line Equipment has increased the load capacity of its Trailevator line of trailers to 3,685 Lbs. The trailers, which come in four models and three sizes, feature a hydraulically operated elevating system that lowers the trailer to the ground for loading and lifts itself and



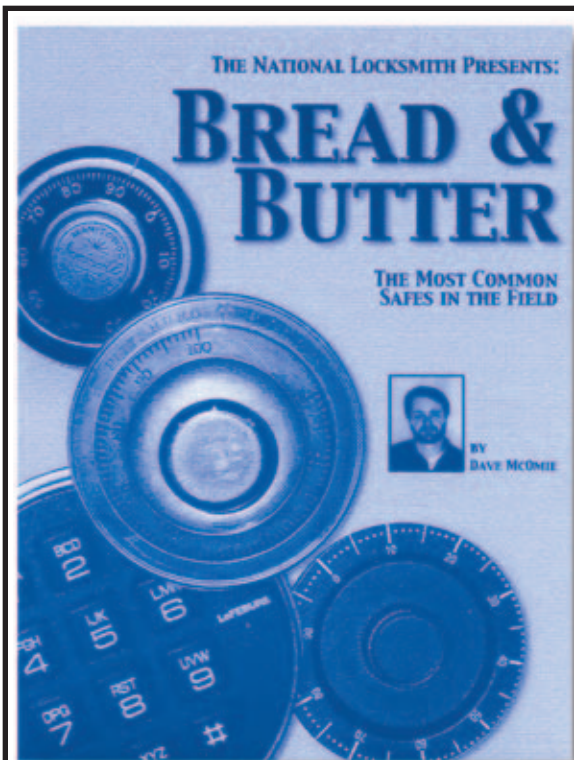
the load back to hauling position.

The solid steel trailer allows the locksmith to transport safes without the need for tailgate lifts.

Jet Groovy Key



Jet's new Groovy Key line will add dazzle to any key display and should spur impulse retail sales. Manufactured with a special process, the keys have an exclusive multi-color design covering the entire key from the bow to the tip. **TNL**



Bread & Butter

Now here is one amazing value!

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#BB - 01



Every so often I run into something that I find so exciting that I just have to write about it. While at a recent convention I saw a new gun safe that was most interesting. You might say “big deal.” Well this one was a big deal. It was sitting in the Corporate Safe Specialist booth and looked like a typical lightweight gun safe, but that is where the similarity stopped.

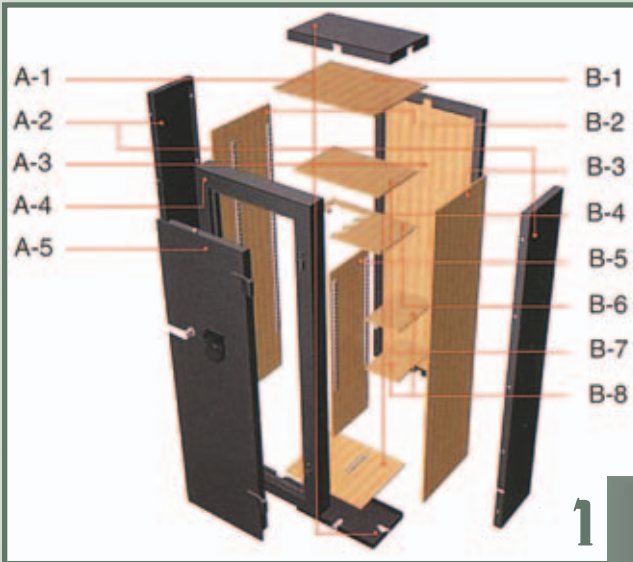
The representative in the booth asked me how I was doing and I said just fine. He said that I was looking at their newest safe, the model GG6022 and that it has a very unusual feature. I asked what could be unusual about a three-hundred pound gun safe. He said “This one is shipped to you in three boxes and can be delivered by UPS!” That blew my mind!

Corporate Safe Specialists has been around for 13 years. Eddie McGunn, Jr. has been in the safe business most of his life. When he was 18 years old, he was moving a large safe for a customer down a flight of stairs. You can probably guess what happened. The safe fell down the flight of stairs, pinning Eddie against the wall. He was lucky to get out of that with only a broken arm.

That’s where the idea came from. There had to be a better way to move hundreds of pounds of steel from one place to another, Eddie thought. Better than moving it all at once, that is. That’s when Eddie thought of the modular safe. (See *photograph 1.*) A safe that comes in lots of pieces where the heaviest piece weighs just over 100 pounds. A safe that is easily assembled while maintaining its physical integrity. A safe like no other safe in the world. A safe that only exists in your dreams. Until now!

The Gunn Gard™ model GG6022 is the realization of that dream. It is an easy to put together modular safe that has a very clean appearance and solid feel after it is assembled. There are no bolts to tighten so you don’t need tools to assemble the safe. I had to try one out, so I took a few pictures as I went along and thought I would share them with you.

To start with, the safe arrived in three big flat boxes. (See *photograph 2.*) When you get big heavy things



The Gunn Gard™ arrives in three boxes.

A good 3-dimensional unfolding view.

delivered, it is hard to keep them from getting roughed up in the process. That is why I was interested in the packaging process. The first box I opened was the safe door. The door was covered in plastic and completely surrounded by Styrofoam. (See *photographs 3.*) The door is made of 1/4" steel and supplied with a Mas-Hamilton, Auditcon series Powerstar 50V electronic lock

The other two boxes held the sides, top, bottom, liner and shelves. The first part of the assembly is obviously the metal parts, so I lined them up against the shop door to give you an idea of what we are up against. (See *photograph 4.*)

The side panels have several pins that protrude from the edge. (See *photograph 5.*) These pins perfectly match the notches in the back panel. (See *photograph 6.*) It is easiest to assemble if the back panel is lying on the floor. Align the side panel pins with the notches in the back panel. When the two pieces are mated, the side panel is slid about 1/2" to lock the two pieces together.

This is a tight fit so you may need to use a persuader. I have a dead blow hammer that works great for this kind of project. Just don't forget to cover the end with a little piece of cardboard before you use the hammer. This will keep you from scratching the paint.

Some may wonder: "If it slides together, won't it also slide apart?" The answer is no. If you take a look at *photograph 7,*



The safe door is the only piece that arrives completely assembled.

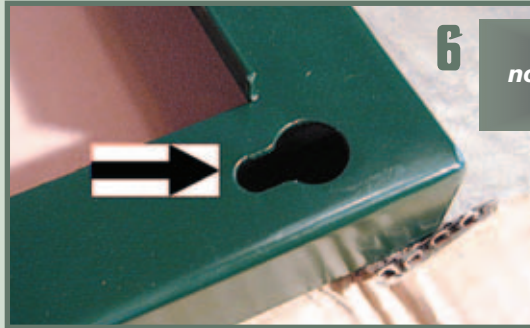


All metal parts are assembled first.



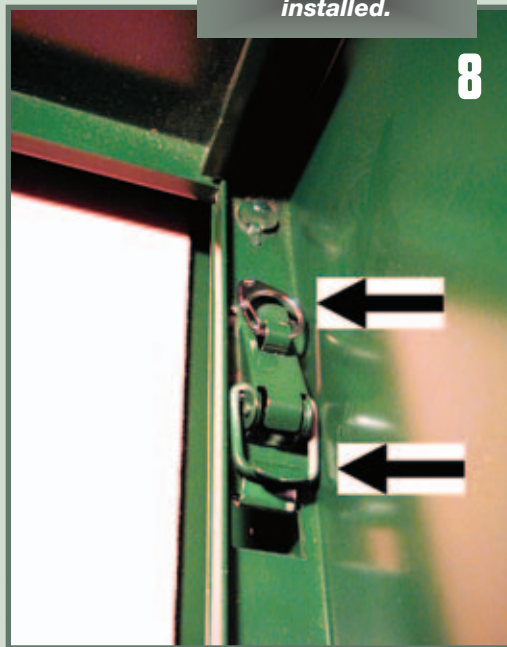
5

One of several pins used to lock the assemblies together.



6

One of several notches that mate with the pins.



8

The latch secured with the clip ring installed.

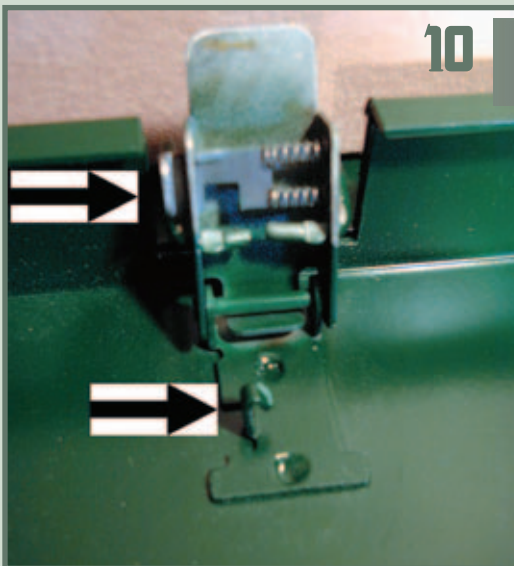


7

One of four latches used to lock the sides with the front and back assemblies.

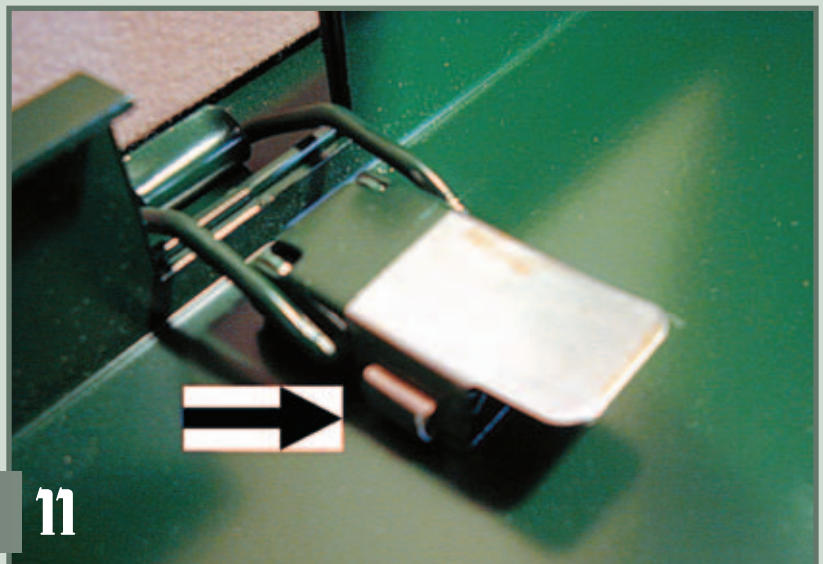
The clip ring used to prevent the latch from accidentally coming loose.

9



10

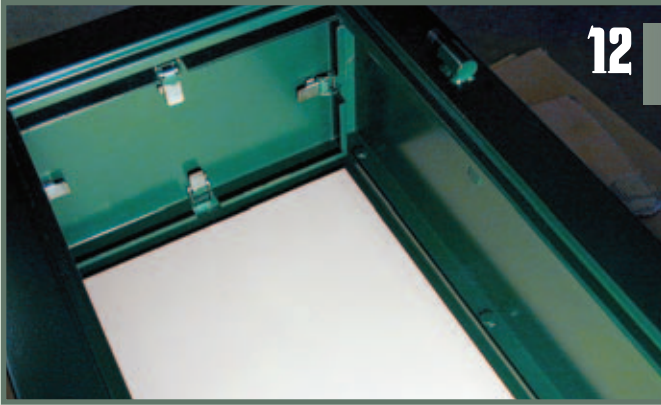
One of eight latches used to secure the top and bottom.



11

You must press the release before the latch can be opened.

Continued from page 20



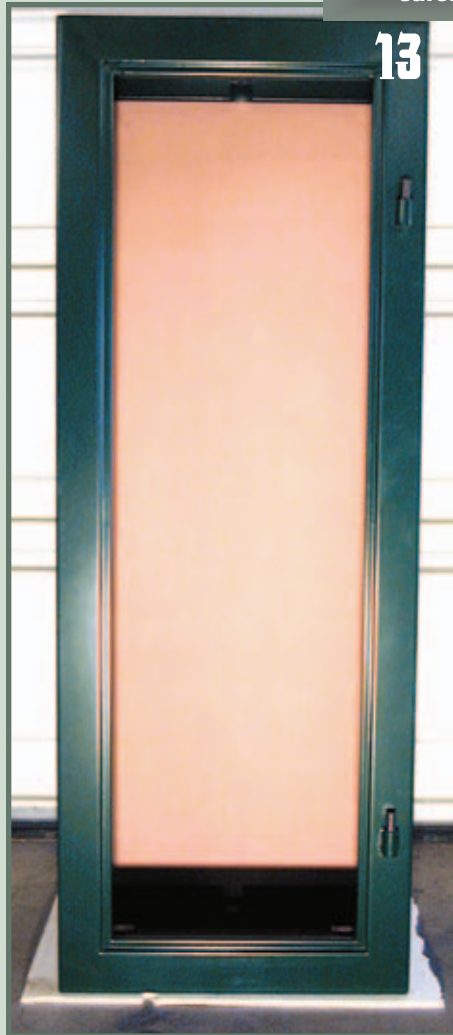
12

The back, top, bottom and sides assembled.

you will see a latch and a hook. When the two pieces are assembled, the latch is engaged (see photograph 8) and secured in position by a small clip ring. (See photograph 9.) The combination of the pins, notches and the latch really does make a solid connection. The other side is assembled in the same way.

The next step is to add the top and bottom panels. Both the top and bottom are secured with four latches each. These latches use a different style clip to lock them in place. (See photograph 10.) To open the latch you will need to squeeze the clip. (See photograph 11.) Until the front assembly is attached, only three of the latches can be secured. Even without the front assembly you can see we are making progress. (See photograph 12.)

The front assembly attaches to the sides just like the back did. Line up the pins with the notches, slide the pieces together and secure the latches. Now it is starting to look like a safe. (See photograph 13.) This is when we start installing the inserts.



13

It's starting to look like a safe.



14

One of the two side panel inserts.



15

Side panel inserts installed.

The first insert to install is the top. It is held in place by the two side inserts. (See photograph 14.) As you can see, there are two vertical rails. These are used to support the shelves. It is important that you install the side inserts so the two rails are to the rear of the safe. (See photograph 15.) This is so the shelves will be in the right place when finished.

The next piece to install is the bottom. The bottom has a piece of aluminum channel attached. (See photograph 16.) The bottom should be installed so the aluminum piece is on top and to the rear. It slides into place easily. (See photograph 17.)

Photograph 18, shows the center divider in place. The bottom of the divider fits in that aluminum channel I just described. It is this divider that gives you the ability to have long guns on one side and small shelves on the other.

Continued from page 22



16

Installing the
bottom panel.



17

Bottom panel
in place.



18

The vertical
divider
installed.



19

One of two different
modular pieces that
attach to the top of
the vertical divider.



20

Steel pin
used to
support
the
shelves.

Continued from page 24



The
completed
safe with
the door
installed.



Lever used to
hold the live
bolts in a
retracted
position.

Supplied with the safe are two different inserts for the next step. A six gun and a nine gun insert. You can use either one. I used the six gun insert that allows long guns on the left while providing a shelf on the right. (See *photograph 19.*) This insert also has an aluminum channel that mates with the divider.

A special pin is used to support the shelves. There are two small shelves on the right side of the divider and one larger shelf that goes into the upper part of the safe. The metal pins are pushed into the side rails and slid down to lock them into place. (See *photograph 20.*)

To complete the safe assembly, set the door on the hinge pins. (See *photograph 21.*) The whole process from start to finish should take less than 30-minutes.

Even though this completes the assembly of the



Live bolts are
automatically
released and
engage under
spring pressure.

safe, things just wouldn't be complete without a look inside the door. The door is made of 1/4" steel that is sledgehammer and pry bar resistant. There are seven live locking bolts located on the top, bottom and latch side of the door. A piece of angle iron is used on the hinge side of the door to secure it when the door is closed.

The door is also equipped with an auto release so the bolts will automatically engage when the door is shut. *Photograph 22*, shows a lever engaged to hold the doors bolts open. When the door is shut, a rod connected to the lever rotates the lever clockwise (as viewed from inside) allowing the bolts to engage under spring power. (See *photograph 23*.) When the locking bolts engage, the snap bolt inside the lock is extended by spring power, preventing the handle from turning to reopen the door. (See *photograph 24*.)

There is one spring-loaded relocker located next to the lock case. (See *photograph 25*.) It is designed to fire if the cover on the lock case is punched.

Photograph 26, shows a full view of the Mas-Hamilton, Auditcon series Powerstar 50V lock. The electronic feature allows very fast and easy access to the safe. No batteries are required with this lock. By turning the knob, power is generated to operate the lock. Punching in a 6-digit combination on the keypad retracts the snap bolt allowing the handle to turn. You have about three seconds to turn the handle after the code is entered. Five consecutive wrong combinations will generate a lockout condition for three minutes.

Safe Specialists have several models of their modular safes to choose from. You have a color choice of burgundy, navy, hunter green or black. At this time, the Gunn Gard™ is only available in one size and without a fire liner. However, more sizes will be available soon as well as the option to include a fire liner.

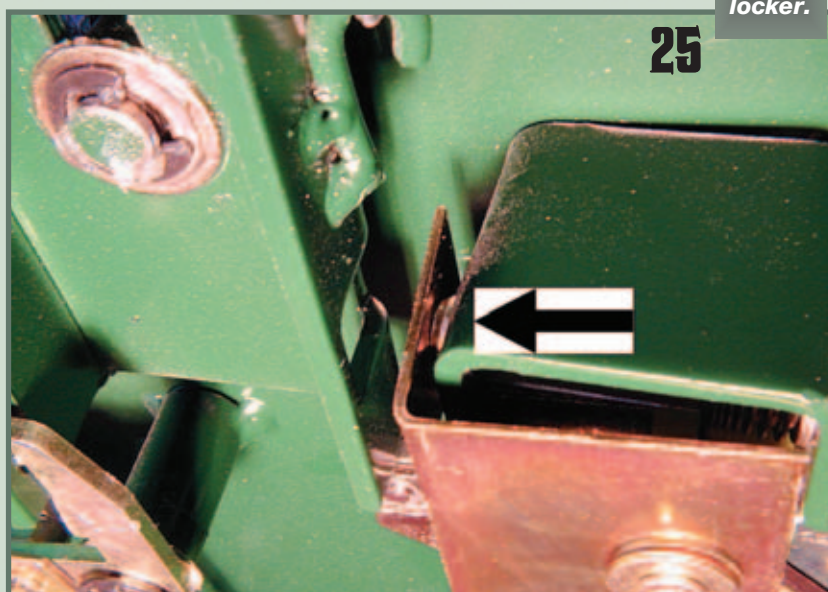
The outside dimensions for the Gunn Gard™ are 60" tall by 22" wide by 16" deep. The suggested retail price for the Gunn Gard™ is \$1395.00. This price includes shipping to your doorstep. I see a lot of profit potential here for the locksmith. I have no doubt that you can have the safe drop shipped right to the customers door and never have to lay a finger on it. There is also a 100% money back guarantee if not satisfied.

For more information about the Gunn Gard™
or any other products
from Corporate Safe Specialists, contact
Eddie McGunn at
1-800-342-3033 or visit their web site at
www.gunngard.com.
Circle #325 on Rapid Reply.

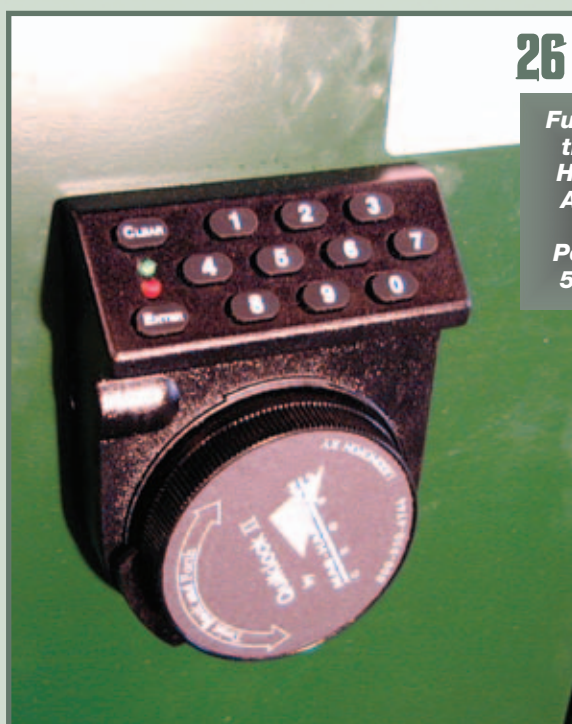
TNL



The locking assembly in the locked condition.



A look at the re-locker.



Full view of the Mas-Hamilton, Auditcon series, Powerstar 50V lock.

The MagnaVault®

by Hayman

The security industry serves a demanding marketplace. Your customers want security they can depend on from knowledgeable professionals. They require the highest level of security they can afford to protect valuables they cannot afford to lose. And they want it all yesterday. You, the security professionals, are charged with anticipating your customers' needs, and being able to competitively meet them now. Customers can be counted on to procrastinate until there is a crisis. You need suppliers you can depend on to deliver high-quality products efficiently and affordably.

For over 30 years Hayman Safe Company has provided high-quality B- and C-rated chests, depositories and in-floor safes. Now they have taken those years of proven safe design experience a step further.

Hayman Safe Company's new MagnaVault line is engineered to bridge the gap between BF and TL security at a competitive BF price. (See photograph 1.) Attention to detail is evident in the design and engineering of



1. Hayman Safe Company's new MagnaVault® line.



2. MagnaVault® combines the brute strength of steel with a composite construction.

these safes. MagnaVault® combines the brute strength of Hayman's high-quality steel safes with a heavy-weight composite construction. Hayman is so convinced of the quality and security of this new product line, that they are currently in the process of having Underwriter's Laboratory (UL) test the design for an Residential Security Container (RSC) label.

The design of the MagnaVault® incorporates 2" thick walls encasing two layers of high-density composite concrete/insulation. (See photograph 2.) The doors are a full 5" thick, and have a consistently tight fit secured by impressive 1-1/2" bolts and a full-length hinge-side locking bar. (See photograph 3.) The MagnaVault® safes are outfitted with oversized hinges to ensure smooth and durable operation for many years. (See photograph 4.)

The unique placement of the

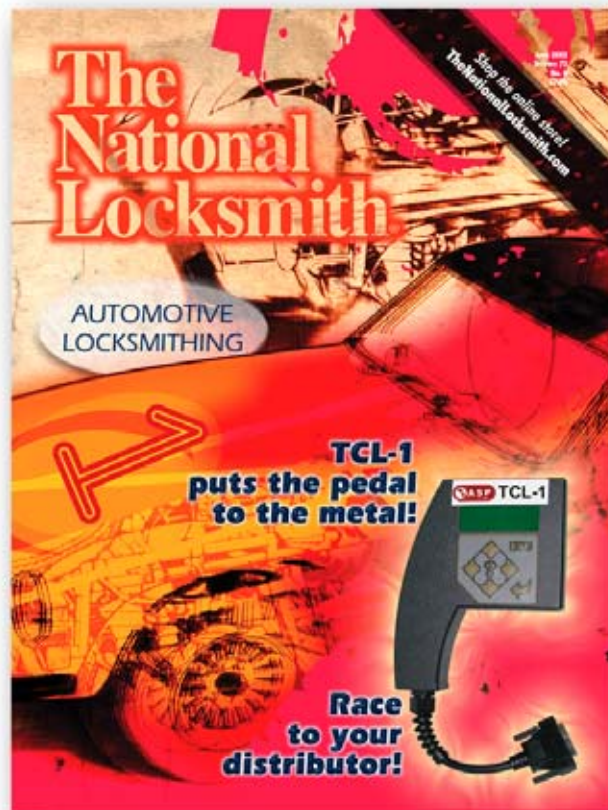


3. The doors are a full 5" thick.

hardplate is an engineering feature in-and-of itself. Two plates of hardened steel are literally encased in the composite of the door, providing significant protection to the locking mechanism. These plates are mounted at an angle, so as to effectively deflect any drill attack away from the target. The protection this feature affords is far superior to previous designs.

The MagnaVault® line is also proven to be a superior fire safe. When Hayman Safe Company requested that this new product be

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tested for a 1-hour fire label, the independent testing facility found MagnaVault® to qualify for certification with a 1-1/2 hour fire label (MV5-1215 not rated due to compact size). The aforementioned attention to detail is again evident in the special care taken to cure the two layers of composite insulation well, so as to resist formation of rust or mildew inside the units. That's a miserable problem to combat after the sale! (See photograph 5.)

Hayman competitively fills the need for quality BF safes with an extensive assortment of MagnaVault® sizes. There are six available sizes ranging from the compact MV5-1215 @ .86 cu. ft. to the MV5-6028 @ 16.77 cu. ft. capacity. The safes feature standard adjustable shelving for maximum versatility. Custom interiors are also available and MagnaVault® comes in your choice of two colors—grey or tan.

Hayman Safe Company has depended on Sargent & Greenleaf combination locks as a standard quality feature for many years; but they also have a wide variety of other lock options available upon request.

Installation is accomplished by

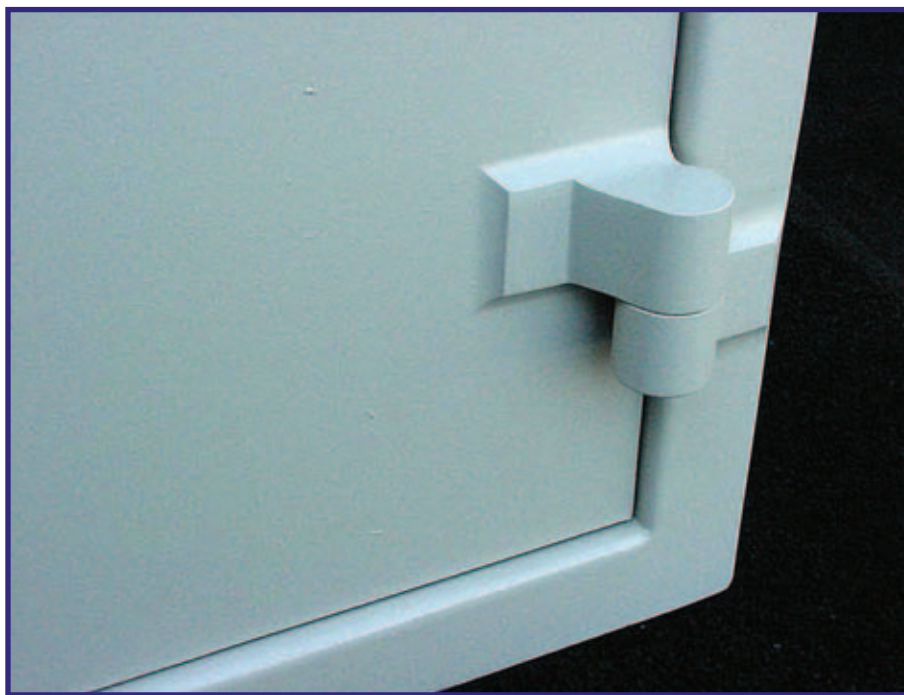
means of a single mounting hole centrally positioned in the bottom of the safe. The 9/16" hole is recessed so that the bolt will not interfere with the safe contents once the safe is in use. (See photograph 5.) Hayman Safe Company does not make a recommendation as to what type of mounting hardware should be used, as each installation can present unique challenges.

While there are many alternatives available to you in the B-rated fire safe category, Hayman Safe Company's MagnaVault® represents

a valuable step up in quality and construction, while maintaining competitive BF pricing. This line is very much in keeping with the familiar Hayman tradition of providing high-quality safe products.

For more information contact Hayman Safe Co. Inc., 1295 S.R. 426, Hartford, CT 06105. Phone: 800-444-5434; Fax: (407) 365-9858; E-mail: INFO@HAYMANSAFE.COM; Web: www.haymansafe.com. Circle 301 on Rapid Reply.

TNL

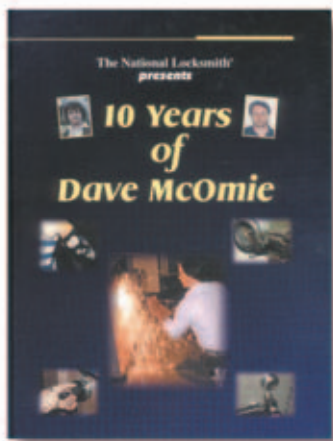


4. The safe is outfitted with oversized hinges



5. The recessed 9/16" bolt hole will not interfere with the safe contents.

10 Years of Dave McOmie



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#DM - 10

S&G

6150

workhorse

by Brian Costley,
CML, CMST

Think about the commercial safes you've worked on over the years. How many of them contained a single inner compartment with a money drop? Quite a few, I'll bet. Virtually every cash business relies on a safe with a money drop to protect its receipts from outright theft and "shrinkage". This is also referred to as "mysterious disappearance," among other terms. No matter what it's called, the end result is the same—money disappears. When several people have access to a safe, it's hard to identify the culprit.

An internal money drop, secured with its own lock, can at least help protect the "excess" cash from a crime of opportunity. If it didn't, you wouldn't see large fast food chains specifying it in their safes. These organizations avoid unnecessary expense like the plague, and money drops represent extra cost in a safe.

For decades, the best defense an inner compartment could offer was a secondary combination lock, or more likely, a key lock. While everyone who did business with the safe possessed the outer door combination, the number of employees with the key or combination to the inner sanctum was further restricted. However, those with the ability to

enter the drop compartment all had equal and virtually unrestricted access. The number of suspects to a shrinkage occurrence was diminished, but it still pretty much came down to "eeney-meeneey-miney-mo" when selecting a designated culprit.

Today's electronic lock technology significantly tightens the proverbial screws on practitioners of the art of shrinkage. The new Sargent & Greenleaf 6150 not only brings safe access control to a high art, but it also brings audit trail accountability and enhanced security features to the party. (See photograph 1.)

When all those unfamiliar components are unpacked, you might develop butterflies over the impending installation. (See photograph 2.) Actually, the 6150 is very straightforward to install. In fact, you can download the installation instructions at www.sglocks.com, and see for yourself. Just click on the "Download" button when you log on. And it doesn't hurt to plan a little extra time to snoop around the S&G site to see what other information is available, or enter the monthly safeperson's contest. You could win a free electronic lock complete with gold-plated keypad.

The 6150 is the ultimate control for a commercial safe. The basic model is designed to supervise two separate lock bodies. Typically, one lock would be used to secure the safe's outer door, and the other would protect the inner money drop compartment.

Although it's covered in the installation instructions, a couple of points are worth stressing. Pay close attention to wire and cable runs. Wire is the lifeblood of an electronic lock. When anything hinky happens to a wire, such as a crimp, cut, or crush, the lock tends to respond by not working. Fortunately, it's easy to skew the odds greatly in your favor by paying attention to detail as you are routing wires.

The installation shown in the accompanying photos was done at a safe manufacturer's facility, and proper precautions were taken to protect the wire from moving boltwork and the possibility of coming into contact with things like cash drawers and money bag zippers.

The control unit was mounted under the outer doors boltwork cover, away from pens, paper clips, and other devices that could cause wire damage and electrical shorts. Since the control unit also operates the lock on the door of the money drop compartment, a wire has to traverse the



1. Unlike many electronic locks, the 6150 features an easy-to-read LCD that prompts you for input and tells you what's happening with the lock.



2. The major components of the 6150 are shown here—keypad, control unit, a lock body, and the AC power supply.

treacherous path from the control box, across the outer door hinge, into the drop box, across the drop box hinge, and on to the lock body. Much of this journey exposes the cable to typical “weapons” like the dreaded cash drawer. The safe maker, recognizing the potential danger, has sheathed the lock cable in a heavy duty, flexible, plastic sleeve anywhere it could be subjected to abuse. The cabling is tied securely into place where it crosses the inside of the money drop door. (See *photograph 3.*) Here, it won’t be subjected to anything more dangerous than a fifty-dollar bill or an envelope, so the wire is in no imminent danger. The application of wire ties and tie blocks will keep the cable from dangling and snagging on clothing, watch bands, etc. during cash removal.

With the installation completed, the real strength of the 6150 can be exercised. This is more than just a single keypad operating two separate locks. It’s a single control unit directing two locks through a full range of security options. (See *photograph 4.*)

At its most basic level, the 6150 can be configured as either a dual control or management/employee access control. As the name implies, dual control requires two separate codes to be entered before the locks will operate. The other mode (management/employee) lets a supervisor toggle the lock between a state where it will allow employee codes to access the safe and one where it will not.

You say you want time delay on the money drop door and the outer door, but you need a longer delay on the drop door? No problem. Each lock’s time delay is set separately, anywhere from 1 to 99 minutes, and you can even set the post time delay opening windows to different values (1 to 9 minutes). But what about armored car pickups? These guys



3. A protected loop of lock cable is visible below and beneath the inner door. Note how the cable is carefully routed and secured.

don’t like to wait around for a time delay to expire. The 6150 can provide a time delay override code to allow immediate safe access when needed.

Need a time lock on the safe? The 6150 can independently time lock either of the two doors it controls. It can use a repeating weekly program that allows for extra closes, and can even take into account holidays on which the business will be closed. Need to time lock the safe at an unscheduled time? The 6150 will accommodate your needs with a time lock short close; an extra one-time period of time lock protection that can be programmed quickly and easily.



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#HT - CMK1



4. This is a factory installed 6150 on a drop safe that is located inside a training restaurant for a nationwide fast food chain. Note the Touch Key reader port at the bottom left of the keypad.

In addition to this type of control, the 6150 can be directed to let some codes open both the outer and inner doors, while other codes can only access one of the locks. Because the controller can retract both lock bolts at once for a properly authorized code holder, the length of time the bolts remain retracted is programmable anywhere from 5 to 60 seconds for each lock. This gives the operator time to open the

the activity. For instance, the lock will record the PIN position number of any user who opens either (or both) locks, or changes his code, or performs any operation. The mere presence of this feature acts as a formidable deterrent to cash "shrinkage."

Audit information can be downloaded from the control unit either by connecting a computer directly to the keypad via cable, or by transferring the data into a Touch Key via a built in keypad port, then transferring the audit information from the key to a PC. Audit trail software in your PC then coordinates the data with any previously downloaded audits, and displays the information. It can then be saved to a file on your computer.

Limited programming of the 6150 can be accomplished via the keypad. Probably the most common keypad programming would be an authorized user changing his or her own code. For the really serious work of setting features like the time lock function, the programming is done on your PC, using 6150 software. Once the features and values are set to meet the customer's needs, they can be downloaded into a Touch Key, then transferred via the keypad port. Alternatively, the computer can be connected directly to the keypad via cable.

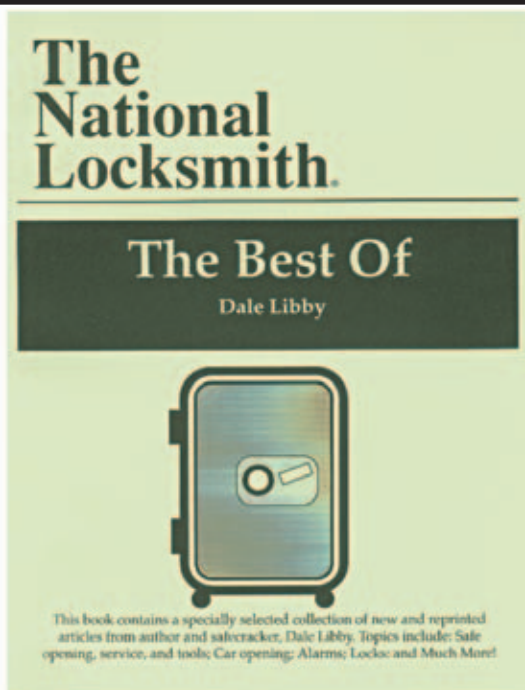
No matter what type of access control a customer needs in a dual compartment safe, the 6150 likely has a feature or set of features to meet the requirements. And the best part is that all these features are available in a convenient, user friendly package.

*For more information on Sargent & Greenleaf products call: 800-826-7652; Fax: (859) 887-2057; E-mail: custsvc@sglocks.com; Web: www.sglocks.com. Circle #326 on Rapid Reply. **TNL***

outer door and the inner door without having to rush.

Remote enable/disable is yet another standard 6150 feature. If desired the control unit can be instructed to "turn off" unless an outside signal is received. The signal could be sent from the next office or thousands of miles away, depending on the technology used to transmit the enable message.

The audit trail feature offers the capability of capturing up to 600 events, each related to the particular time and date of



The Best of Dale Libby

These are the articles that started the safe opening revolution.

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#DALE

CONVERT-A-BOLT 515

by Charles Stephenson, CPS

You may know the Convert-A-Bolt 515 from Ilco Unican through the ad that states “There is nothing new about this lock except...” or you may have attended one of the seminars Ilco has given. If not, let me guide you through a basic primer for this rookie lock.

Orlando Consalvi, in the Winston Salem, factory wrote the specifications for the 515 and from day one, selected what he feels are the strongest and most demanded features of the biggest selling electronic safe locks on the market. Along the development process, opportunities presented themselves for the 515 to incorporate a few unique features.

Levels of Security:

The 515 offers four levels of security by way of one master code, one supervisor code, seven user codes and one courier code. Each of the ten code users can open the lock and change their own code. I sometimes refer to the master code as the programmers’ code since this one code has authority over all other program features and can open the lock. The one supervisor code has authority over the seven user codes in that the supervisor can add, lockout (suspend) or delete the user codes as well as open the lock. The seven user codes have the authority to open the lock and to change their own code. The courier code has time delay override authority and is not subject to the restrictions such as lockout and dual custody.

The 515 does not require any external programmer or computer program since all programming is done from the keypad itself. The keypad also houses two AAA alkaline batteries that provide for over 5,000 openings. (See photograph 1.) The outer ring or bezel of the keypad rotates clockwise 60 degrees to turn the spindle that connects to the lock. Once the code has been entered, the rotation of the bezel ring retracts the bolt and also extends the bolt.

Convert-A-Bolt:

The bolt is a patented feature of the 515. The name Convert-A-Bolt refers to the field selectable deadbolt mode or the spring bolt mode. The installer can remove a setscrew in the end of the bolt (see photograph 2), remove the steel dowel pin (leaving the spring in the bolt) and replace the setscrew to convert the bolt from deadbolt to spring bolt.

The spring bolt mode allows the 515 to be returned to the locked position without the bolt actually being extended. The bolt works of the safe door block full extension of the bolt until the door is closed and the handle turned to the locked position. The bolt in the 515 will then fully extend due to the spring, once again blocking the safes’ bolt works.

Photograph 3, shows the two holes cast into the end of the bolt to accommodate bolt attachments. An option is a one-inch bolt extension. Attachments or the extension to the bolt are made with two 8-32 (or M4) screws.

Should a user of the lock fail to return the bolt fully to the locked position, an LED and audible tone will alert everyone to this fact. The tone and light will continue to signal until either the bolt is fully extended or the batteries are completely dead.



1. The keypad of the 515.



2. A setscrew in the end of the bolt.



3. The two holes accommodate bolt attachments.

Programming Features:

Programmable features include time delay of 1-99 minutes and an opening window of 1-9 minutes. Only the courier code can override the time delay feature. Dual custody feature requires inputting two codes that may be comprised of the supervisor plus one user or any two users before the lock can be opened. If duress (silent alarm) is desired the model 515D offers this feature and a connecting block for the alarm system comes installed on the back cover as see in *photograph 4*. The lockout feature allows the master code or the supervisor code to suspend the seven user codes until either one reinstates the codes to valid mode. During the lock out mode a user inputting their code will be signaled with a red LED and low pitch tone.



4. A connecting block for the alarm system comes installed on the back cover.



5. The input pad comes with two fascia plates.

The input pad comes with two fascia plates one in a brushed brass finish and the other in brushed chrome finish allowing the installer to choose the finish that best matches the safe door. (See *photograph 5*.)

An optional battery box is available for the 515 that can be attached with screws or double sided tape on the inside of the safe and houses two C cell alkaline batteries. This is an option to consider if the 515 is going to experience heavy daily usage.

Input Code Security:

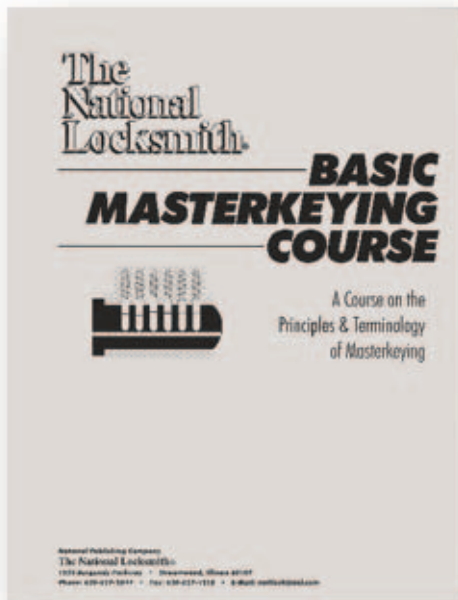
If a customer is nervous about someone looking over his shoulder when inputting his code, before inputting the last digit, random numbers can be input as many times as desired, before the final digit and then the ENTER button is pressed. For example: Let's say the code is 2-1-2-3-4-5-6. Under normal conditions I would press 2-1-2-3-4-5-6 ENTER when opening the safe. To confuse an onlooker, I would press 2-1-2-3-4-5 and then as many random digits as I desire (3-8-2-4-7 for example) before finally pressing 6 followed by the

ENTER button. The spot for the last digit will refresh whenever you press a number. Only the number you press immediately before you press the final (and valid) number is recorded by the processor and compared to the valid codes in memory.

Lock Installation:

When installing a 515 there are a couple of very important things for you to note. First, read the instructions since this lock installs slightly different than similar locks on the market you may have installed in the past. When cutting the spindle to length, there is a 1/4"

Basic Masterkeying Course



13 Lesson
450 page course

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#MK - 1

engagement in the input pad and another 1/4" engagement in the lock body. This allows some forgiveness when measuring. Just measure the entire door thickness and add 1/2". The standard spindle is 4.5" allowing installation on doors up to 4" thick. A 7" spindle is available for thicker doors and may be ordered from the distributor.

It is critical to seat the spindle in the input pad so the cable channel is directed towards the rear of the lock. *Photograph 6*, shows the proper orientation of the spindle in the back of the input pad when the lock is to be mounted RH. The lock body is

relieved to allow the cable to rotate with the turning of the spindle and avoid unnecessary wear when the spindle turns. (*See photograph 7.*)

Another critical point is the alignment of the arrow cast into the bottom of the lock case with the index line cast into the spindle hub. (*See photograph 7.*) These must be in alignment or the lock will not open. The internal mechanism of the lock is comprised of two cams, each with a gate just as you are familiar with in mechanical combination locks. (*See photograph 8.*)

The two cams are held together with a spring so the gates are misaligned and will turn together to prevent the lever nose from entering either gate. Once a valid code is entered, the motor rotates the worm gear that pulls the flat lever so it in turn pushes the brass hook under the bottom cam plate. A pin extending from the bottom of the cam plate is hooked thereby holding the bottom cam plate stationary. The hub in which the spindle is seated, has the top cam plate cast onto the opposite end. As the spindle is rotated, the top cam plates' gate comes into alignment with the bottom cam plates' gate. The alignment of the two cam plate gates allows the drop lever nose to enter. As the spindle continues to rotate the bolt is retracted.

After a few seconds, the motor reverses, the hook is allowed to spring

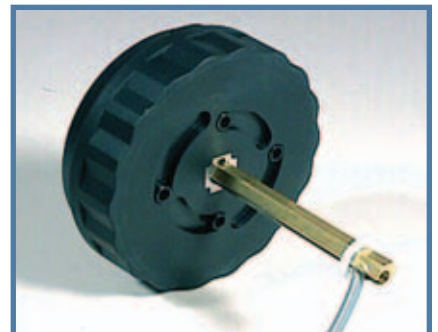
How To Re-Key Cylinders



This software simplifies the process of re-keying various types of cylinders.

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#HT - RKC1



6. Proper orientation of the spindle.



7. The lock body is relieved for the cable to rotate with the turning of the spindle.



8. The internal mechanism of the lock is comprised of two cams.

back to its "at rest" position. When the spindle is rotated to extend the bolt, the lever nose is pushed out of the gates. Finally, the two cam plates separate their gates via the spring attaching the two cams.

Programming Specifications:

Programming is done from the input pad as mentioned before, but here are a couple of important things to remember. The lock must be open, (the bolt must be retracted) before any programming can take place. This is a feature of the 515 to help prevent lockouts during simple code changes. Once the lock has been opened, the code must be entered once again to enter programming mode.

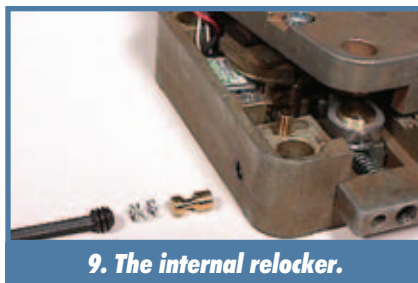
To prevent one user from discovering another user's code by accident, the 515 employs an I.D. plus code protocol. The I.D. of the code owner precedes each code. The master code is always I.D. 0, the supervisor is I.D. 1, the users are I.D.'s 2-3-4-5-6-7 or 8 and the courier is I.D. 9. Now, the master code starts with 0 plus any seven digits while the supervisor, users and the courier use their I.D. plus six digits. The supervisor, users and courier can all choose 1-2-3-4-5-6 as their code since they precede that code with their I.D. and therefore no one will discover the others code.

Troubleshooting:

A couple of troubleshooting tips are in order at this point. Once you have installed that 515 and it won't open after entering a valid code, check the alignment of the hub index with the arrow. What if the lock won't stop beeping and the red LED blinking after opening and closing the lock? Check the alignment of the hub index with the arrow.

Relocker Reset:

Let's say you have carefully installed the 515, attached the relocker plate on the back of the lock and now the moment of truth arrives. You input a valid code, get the green light and the bezel ring will only turn about twenty degrees, not allowing the lock to open. Refer to *photograph 9*, and reset the internal relocker. When attaching a relocker plate, you must be very careful not to allow the cover to separate from the lock body. As little as twenty thousandths of an inch separation will allow the internal relocker to set.



9. The internal relocker.

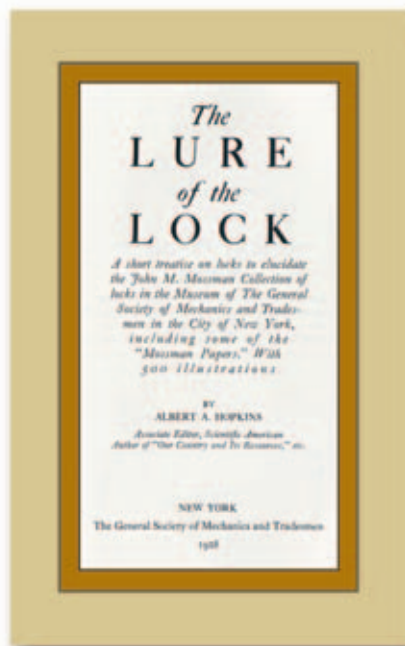
To reset the internal relocker you will need a 1/8" hex key to remove the setscrew from the lock case. Under the setscrew is a spring and relock pin. The cover must be lifted slightly so you can lift the vertical pin that

holds the relock pin in the "ready" position. The end of the vertical pin rests in the indented portion of the relock pin. First, position the relock pin, insert the vertical pin and then reattach the cover. Now install the spring, finally the setscrew and you have reset the internal relocker.

Just as the ads have said, there is nothing original about this lock except...

For more information on Ilco safe lock products call: 800-849-8324; Fax: (336) 725-3269; E-mail: info@win.ilcounican.com; Web: www.ilcounican.com. Circle 341 on Rapid Reply. **INL**

The Lure of the Lock



This hardcover book, compiled in 1928, features dozens and dozens of beautiful photographs on ancient through modern locks.

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#LURE



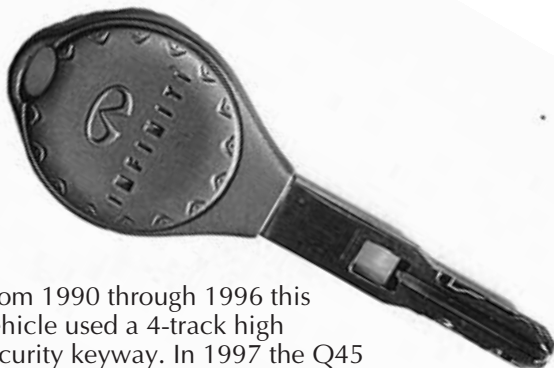
1990-96 Infiniti Q45

part 1

1 This is the first of a two part series. The Infiniti Q45 is Infiniti's flagship car. This car has all the bells and whistles.



by Michael Hyde



2

From 1990 through 1996 this vehicle used a 4-track high security keyway. In 1997 the Q45 switched to a conventional keyway and a transponder was added.



4

Wedge the door open and insert the opening tool above door handle.

Auto Opening

3

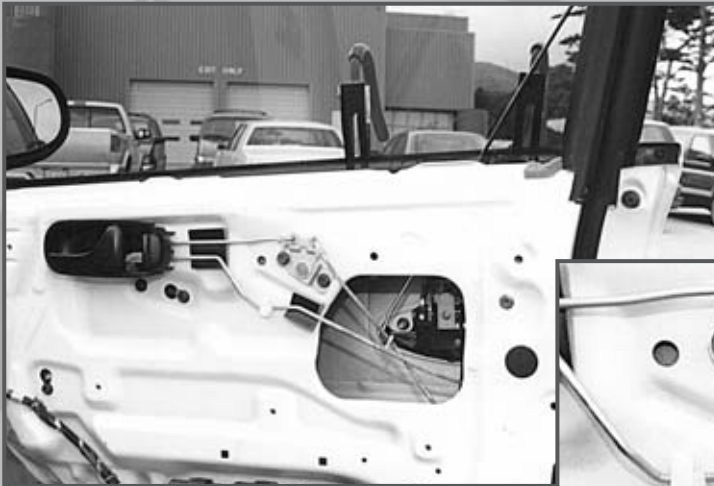


To open the Q45 you will need a horizontal slide linkage tool and a couple of good wedges. As with any opening, you must use caution when inserting the wedges. It is best to obtain a quality opening set and follow their recommendations.



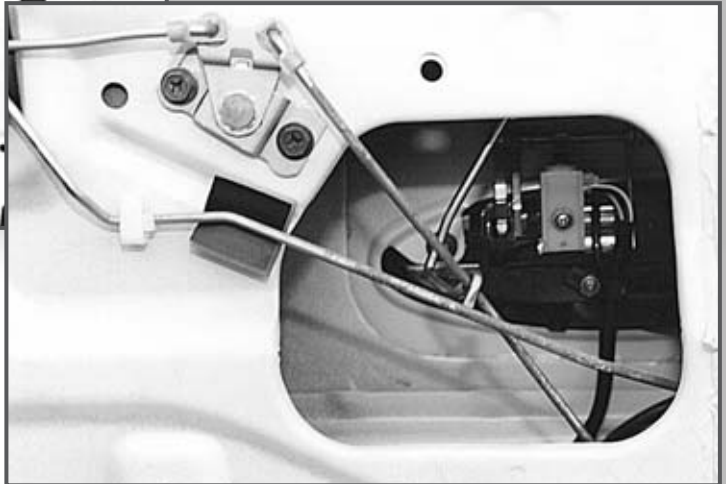
Continued from page 44

5



The linkage rods are exposed and easy to find.

6



Slide the linkage rod forward to unlock the door.

7



Open the glove box and located on the left side is the factory code and VIN sticker.

8



The four numbers on top is the code number. The code series runs from 0001-6000. Only the first two thousand codes have been published.

The Ignition Lock

9



We recommend before you go any further to disconnect the battery.

10



The ignition lock mounts to the top of the steering column.

11



Remove the five Phillips head screws on the underside of the plastic column shroud.

12

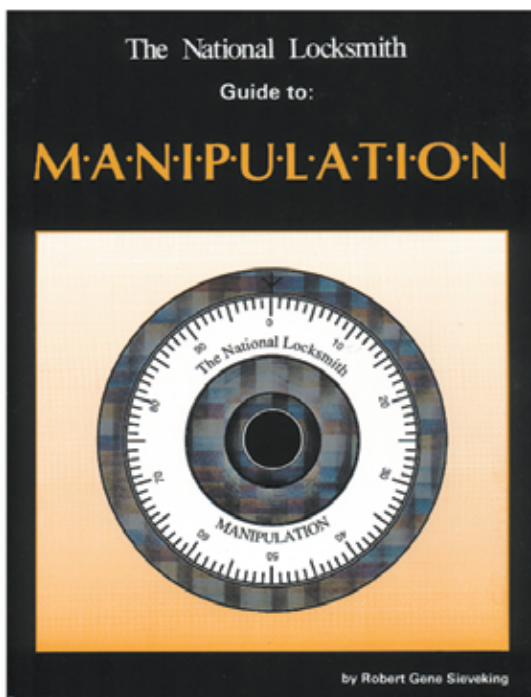


Once the screws are removed you can unsnap the front section of the plastic shroud and remove it from the column.

13



You will now find two more Phillips head screws that were hidden by the other section of the shroud. Remove the screws.



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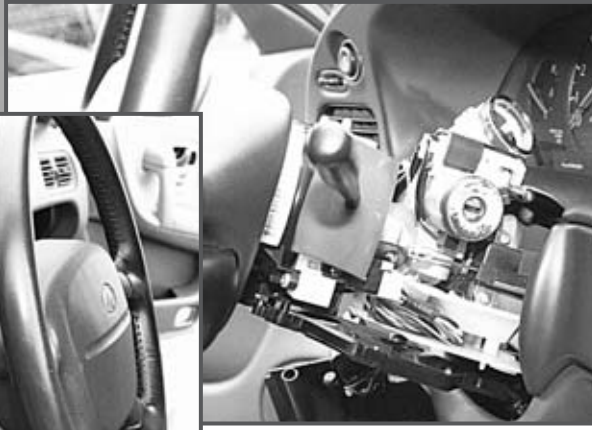


#MAN - 1

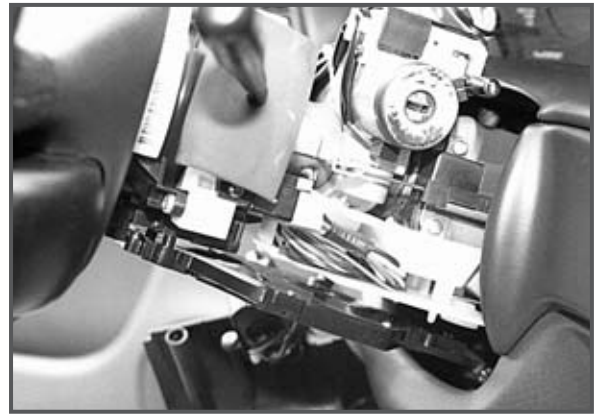
14



Views of the column with the shroud removed.

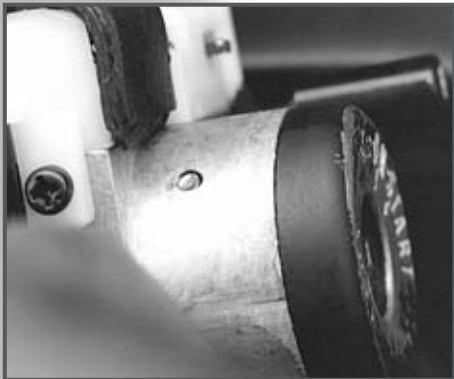


15



The ignition lock is held in place by two shear-head bolts that must be removed. You must move the wiring out of the way so you don't damage it. The turn signal wires might also be in the way. Be careful when working with these wires.

16



The ignition cylinder is held into the ignition housing by two solid roll pins.

17



The ignition lock assembly is pictured.



18

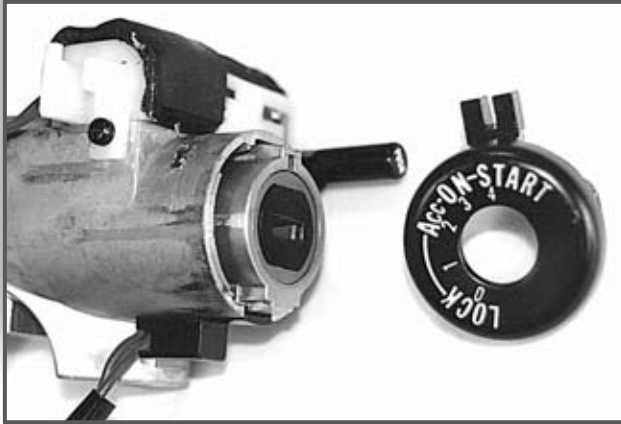


The ignition cylinder is held into the lock housing by two solid roll pins. Drill a small hole directly next to each roll pin and then pry out the pin. I used a 7/64" drill bit to do this. Make sure you don't drill too far into the housing, just enough to remove the pin.

Continued on page 50

Continued from page 48

19



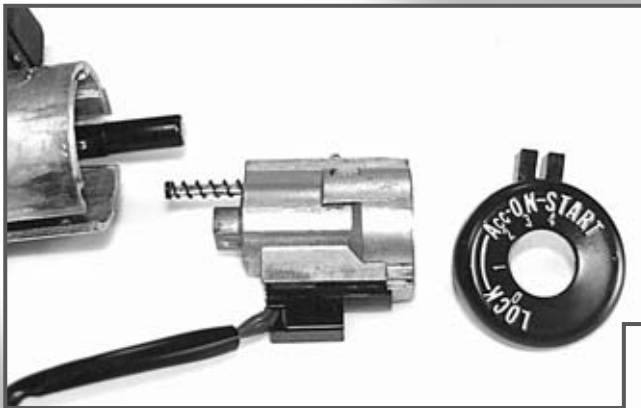
The cylinder face cap can now be removed.

20



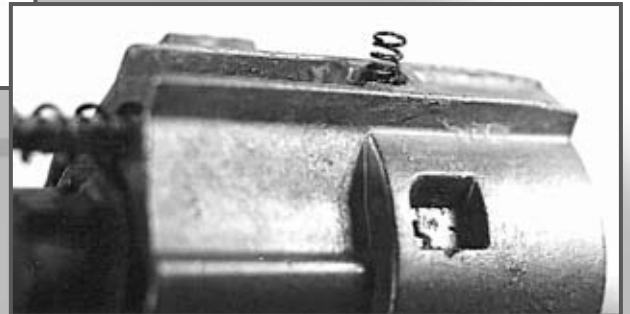
There is a small spring that can go flying as you pull out the cylinder. Watch out for it. The spring is part of the locking bolt assembly.

21



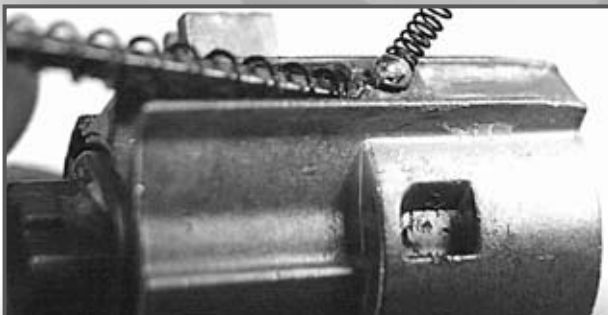
A view of the cylinder face cap, the lock cylinder and the lock housing.

22



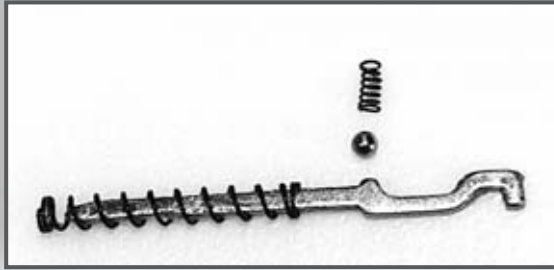
A view of the cylinder and the spring. The spring is part of the locking bolt assembly. When you remove the key, the steering bolt will engage the steering column.

23



As you lift up the lever, you see the ball bearing under the spring.

24



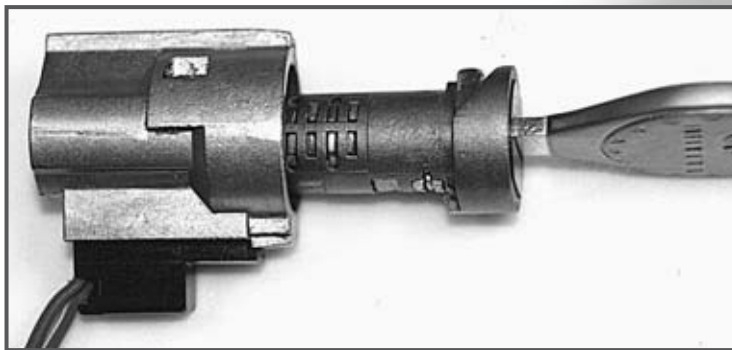
The cylinder locking bolt lever assembly positioned as it appears in the lock assembly.

25

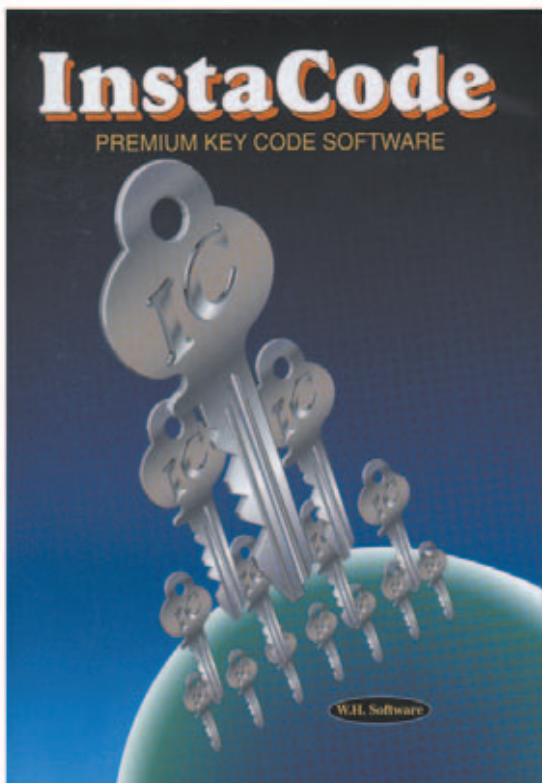


If you do not have a working key you can still disassemble the lock cylinder. Insert a tension wrench or similar small tool to depress the wafers on the right side of the cylinder plug and slide the plug out. The left side is clear and unblocked.

26



A view of the cylinder plug being removed with a working key.



InstaCode 2002

InstaCode 2002, the latest release of InstaCode, includes over 5000 code series covering general/utility, padlock, vehicle and motorcycles.



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#IC - 2002

Key Blanks

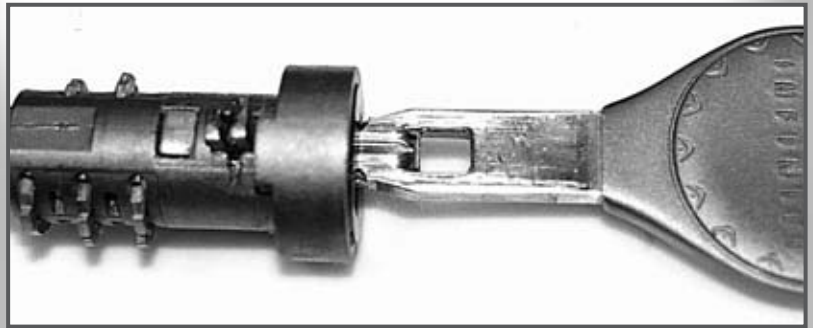
Borekey: 1610PS83	Jet: INF90-PH
Fuki: NSN9P	Lotus: ND48P
Ilco: INF90	Orion: DA25P
Ilco EZ: INF90	Silca: NSN9P

27



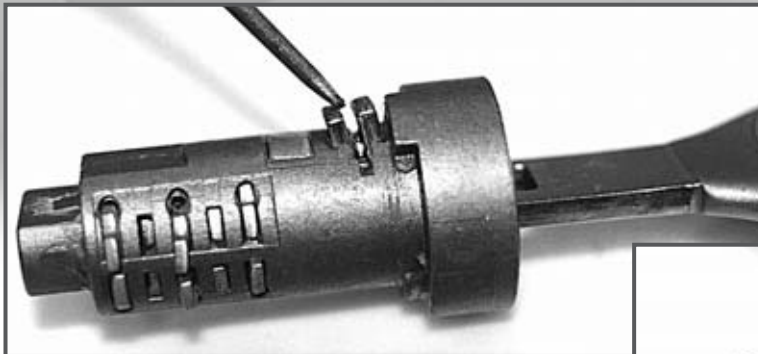
Take note of the key buzzer switch. To avoid damaging the switch, you must depress it when re-inserting the cylinder plug.

28



There is a cut out in the key for what is called a "key trap".

29



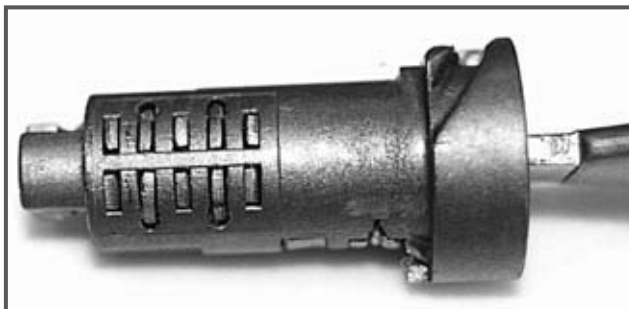
A view of the key trap in the cylinder plug being lifted as the key is inserted.

30



Be careful not to lose the small plug actuator, as it can easily fall out.

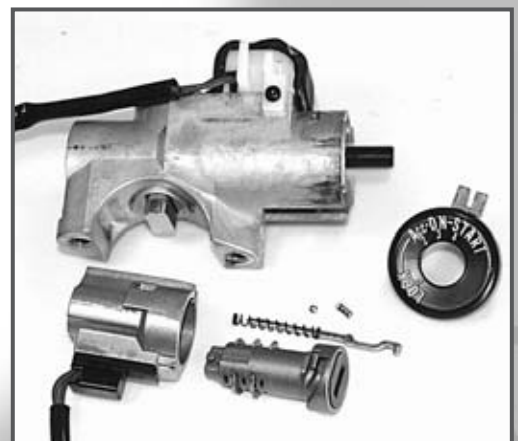
31



The cylinder plug contains five sets of split tumblers. All Infiniti Q45 tumblers are split.

Next month we finish the Infiniti Q45 with the door, trunk and glove box lock.

32



A view of the ignition lock disassembled.



Tubular Locks

by Bob Sieveking

Part Seven



In all previous articles on tubular locks, I have presented the methods and techniques that can be used to defeat most tubular locks. The finesse of a pick instrument is to be preferred over any methods that involve destroying the lock. For many reasons, there will be some locks that can not be picked, or can not be picked in a reasonable and profitable time.

This month, I will address destructive methods of compromising a lock that has been: damaged,

4. Drilling to remove the combining pins (A-1).

Basic Tubular Lock Construction

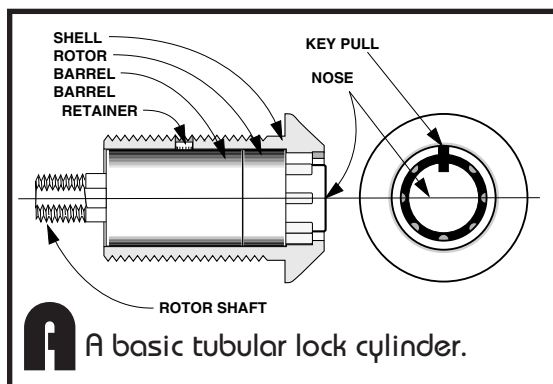
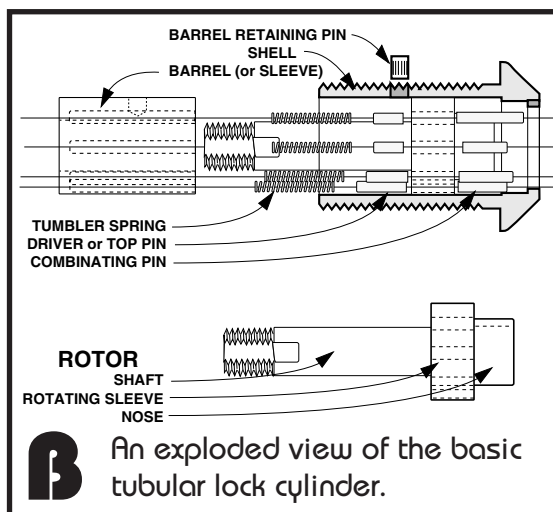
All tubular locks have some basic similarities, regardless of the manufacturer. *Illustration A*, shows a basic tubular lock cylinder. The shell contains and holds the moving parts of the cylinder. In most cases it will be threaded to accept a retaining nut or grooved to accept a slide type retainer. This allows the cylinder to be securely mounted into a panel. The nose, rotor and rotor shaft act as one piece, to actuate a cam, retract a springbolt, or turn a threaded stud. The rotor is allowed to turn only when the proper key solves the combination determined by the combining pins.

The barrel contains the tumbler springs and drivers or top pins. The barrel is retained in the shell by the barrel retaining pin. The nose of the cylinder centers and locates the key as it is inserted into the keyway. The square keyway of the nose allows the key to apply turning torque to the rotor. The key pull slot in the shell allows the key to be inserted and removed from the cylinder at pre-determined positions. The cylinder shown has only one key pull position, but there can be as many as eight key pull positions.

The barrel contains the tumbler springs and drivers or top pins. The barrel is retained in the shell by the barrel retaining pin. The nose of the cylinder centers and locates the key as it is inserted into the keyway. The square keyway of the nose allows the key to apply turning torque to the rotor. The key pull slot in the shell allows the key to be inserted and removed from the cylinder at pre-determined positions. The cylinder shown has only one key pull position, but there can be as many as eight key pull positions.

Illustration B, shows an exploded view of the basic tubular lock cylinder. By removing the barrel retaining

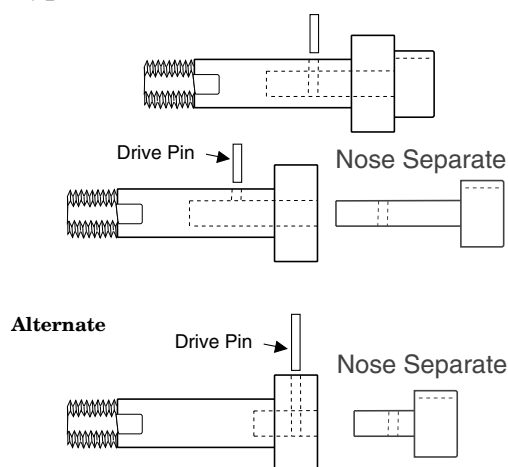
pin, the barrel is free to slide out the rear of the shell. The barrel retaining pin is made of zinc alloy, brass, or mild steel. The barrel is brass, zinc alloy or sintered metal. The rotor, shown in the illustration, is made up of the nose, rotating sleeve, and shaft. These components act as one piece.



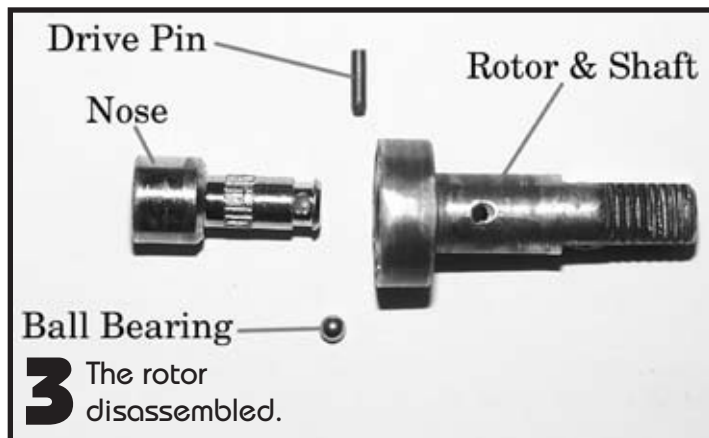
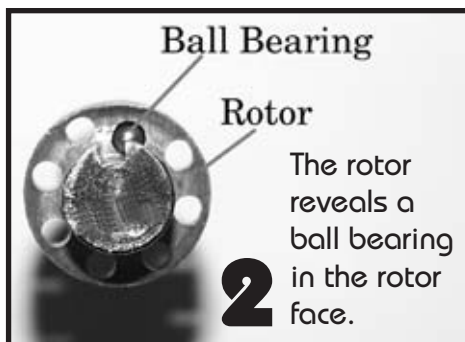
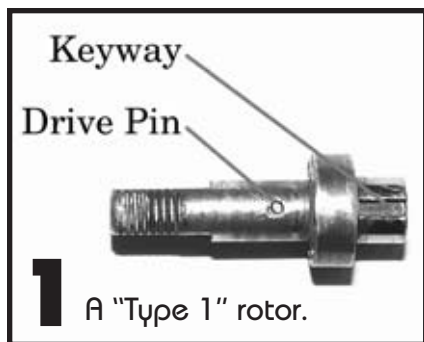
super-glued, corroded beyond reasonable lubrication attempts, torqued to a point that the pick can not operate (i.e. tubular locks that operate a "screw down" threaded rod to secure a pull-out coin box), or simply refuse to be picked. The methods presented here should only be employed "after" picking attempts have failed, or when the condition of the lock indicates that any picking attempt would be a waste of time. The cost and availability of a replacement cylinder should always be weighed before you destroy anything. In the following I will cover:

1. Basic tubular lock construction.
2. Force tools, and drilling the lock shaft (A-ABLE).
3. Drilling to free the rotor (HPC).

Type 1



C The "Type 1" rotor has the rotating sleeve and rotor shaft as one piece and the nose separate.



The actual construction of the rotor will take on minor differences, according to the manufacture and

rotor has the rotating sleeve and rotor shaft as one piece and the nose separate. The nose will usually be

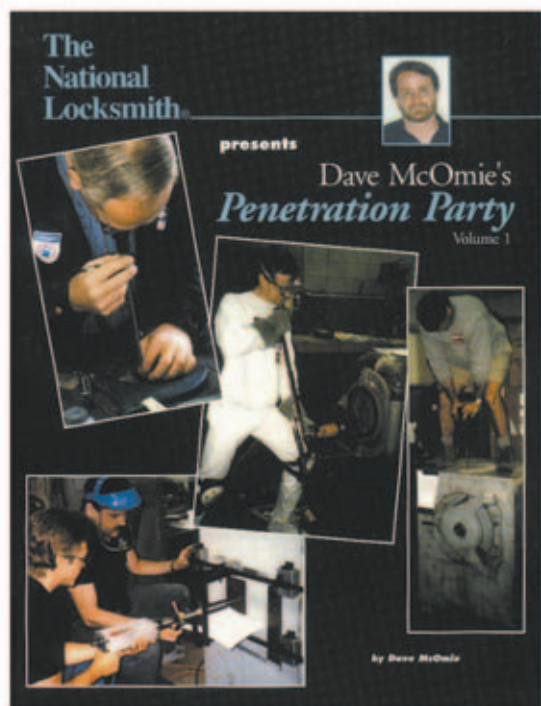
application of the cylinder.

As you anticipate drilling these cylinders, a specific knowledge of rotor construction is very important. *Illustration C*, shows "Type 1" rotor construction. The "Type 1"

steel. If the cylinder is an ACE II, the nose will be hardened. American and Ilco Unican cylinders are Type 1. An alternate configuration will have the drive pin through the rotor, with a shorter shaft on the nose. (This is the current design for ACE II and American cylinders.) The drive pins are usually hardened, which make them a very effective drill barrier.

Photograph 1, shows a "Type 1" rotor. The hardened drive pin aligns with the keyway of the nose. The nose of this rotor is plated brass. A front view of the rotor reveals a ball bearing in the rotor face. (*See photograph 2.*) The ball bearing acts as a drill barrier. *Photograph 3*, shows the rotor disassembled. The ball bearing is retained by the nose. When the nose is removed, the ball bearing will fall out of the rotor.

The second type of rotor is shown in *illustration D*. The "Type 2" rotor has the nose and rotor shaft as one piece, and the rotating sleeve is a separate piece. The rotating sleeve is fixed to the rotor shaft by a drive pin. The pin will normally be hardened. It acts as a drill barrier.



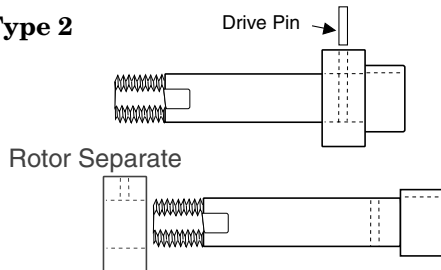
Penetration Party

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Type 2



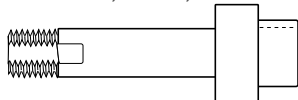
D The "Type 2" rotor has the nose and rotor shaft as one piece, and the rotating sleeve is separate.

Illustration E, shows the most basic rotor. This is a one-piece rotor, as you might find in the Fort Gem cylinder. It is made of zinc alloy, molded in one piece. There are no pins or bearings in this rotor.

Before I leave the subject of rotor design, we should consider one more rotor security device, the "dead pin". Dead pins, ward pins, or

Type 3

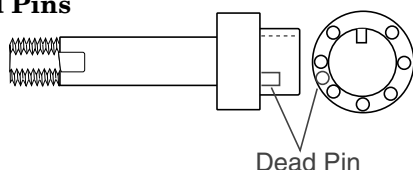
One Piece: Rotor, Shaft, & Nose



E This is a one piece rotor, as you might find in the Fort Gem cylinder.

guard pins, are installed in the face of the rotor and appear very much like the combining pins, but they are solid. They are like a ward in the keyway, preventing a key from fully entering unless a cut is made in the key to accommodate the dead pin. *Illustration F*, shows a dead pin in the

Dead Pins or Guard Pins



F A dead pin in the rotor, between combining pins five and six.

rotor, between combining pins five and six. Dead pins may also be found between pins two and three or three and four. The dead pin complicates picking attempts by preventing the pick from fully entering the keyway. The "Lee" (Pro-Lock) and the "Peterson Pro 1" Tubular picks are the only picks which use a cut-away tip design to bypass dead pins.

Dead pins may also be hardened to prevent the combining pins from being drilled.

Drive pins, ball bearings, and dead pins are all forms of protection for the cylinder. They increase security by complicating picking attempts or preventing force and drill attacks. There is no singular drill method that will be effective for all cylinders. The design of the cylinder will, in most cases, indicate the best method to use.

Ace Breaker kit, by AABLE Locksmiths

The Ace Breaker kit, shown in *photograph 4*, is designed to easily open most types of tubular lock cylinders. There are four components in the kit. They are the: Breaker Head, Drill Guide, Handle, and Drill bit. The Breaker Head is used to break and remove the nose from cylinders having hard steel noses. The Drill Guide is used on all other cylinders, to center the 5/16" bit over the soft nose. The idea is to drill off the nose and drill out the center portion of the rotor. When the rotor shaft separates from the rotating sleeve portion of the rotor, the bit will rotate the shaft to operate the lock, or free the shaft to exit through the rear of the cylinder housing.

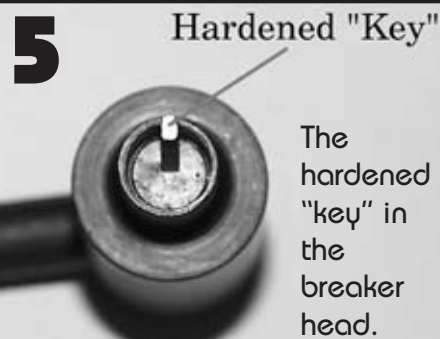
Photograph 5, shows the hardened "key" in the breaker head. The key allows us to put enough torque on the nose of the cylinder to break it at its weakest point. In most cases, the stem of the nose will



break at the drive pin.

The cylinder in *photograph 6*, is an American Lock cam lock. The nose was tested with a pocket magnet. It is steel. The breaker tool is pressed into the keyway to engage the nose. Slow turning pressure is applied, being careful to keep the breaker fully in the keyway. The nose stem broke cleanly, but not at the drive pin. (See *photograph 7*.) The nose of this cylinder was not hard.

The screw in handle was



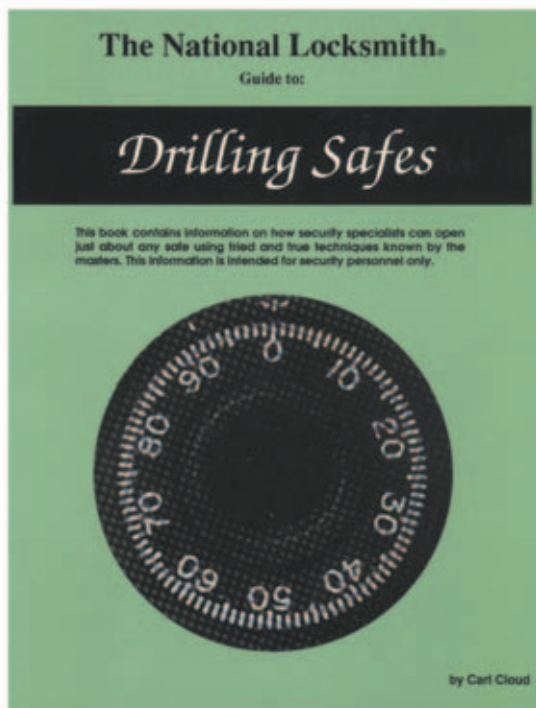
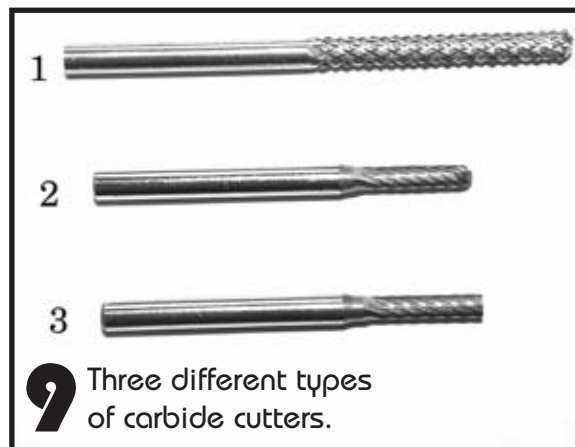
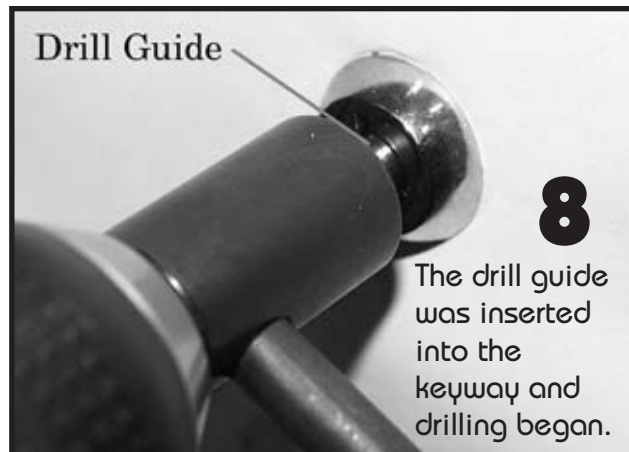
Continued from page 56



transferred from the breaker tool to the drill guide and I chucked up the 5/16" stub length bit. The drill guide was inserted into the keyway and drilling began. (See photograph 8.) About 1/8" into the rotor, the drill stopped cutting. I found the hard pin, which had secured the nose stem in the rotor shaft. Inspection of the hole in the rotor shaft revealed very little, except that the drill would go no further.

Removing the drive pin from the hole requires a little excavation of brass from around the pin.

Photograph 9, shows three different types of carbide cutters. The first is a double cut ball nose straight design. The second is a single cut ball nose straight, and the third is a square ended straight. The ball nose cutters work best in the bottom of a hole. The double cut design is the most aggressive. A Dremmel grinding tool and carbide cutter number one made short work of exposing the drive pin, and it was removed. The carbide cutter worked so well in the hole, that the job was finished with the Dremmel Tool. The rotating sleeve portion of the rotor was separated from the rotor shaft, and the shaft slipped out the rear of the housing.



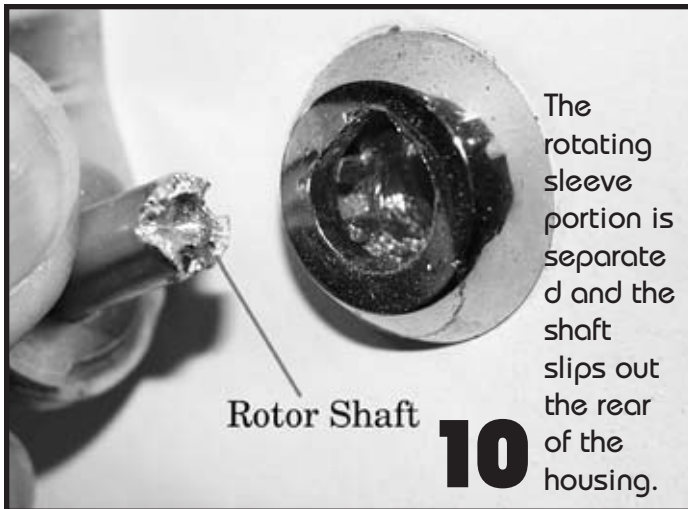
Drilling Safes

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#DS - 1



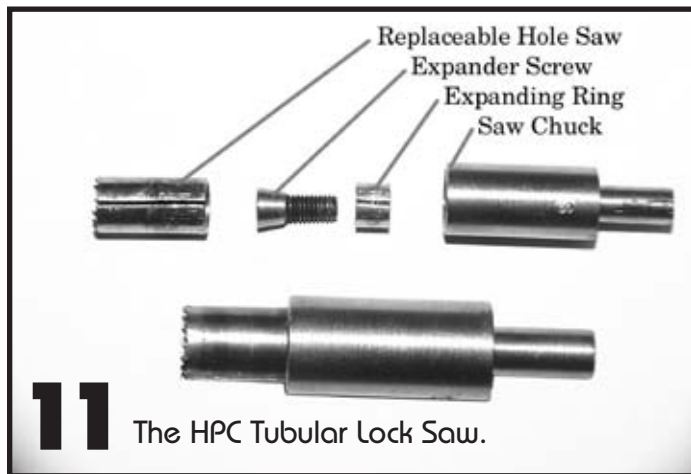
10

The rotating sleeve portion is separated and the shaft slips out the rear of the housing.

removing the nose from the rotor. It is easy to use and quite fast. (See photograph 11.) The hole saw blade is held in the saw chuck by an expanding ring and socket head expander screw. When assembled, the socket head screw is tightened to secure the blade.

(See photograph 10.) If this had been a padlock or spring latch cylinder, a slot could have been milled into the shaft to accommodate a straight blade

To give the HPC drill an even test, I drilled another American Lock cylinder. This cylinder has a steel nose. The hole saw pilots over the nose of the cylinder and eats away the combining pins and separates the rotor from the rotor shaft. It is necessary to remove the drill every few seconds to clear the chips and metal dust. (See photograph 12.)



11

The HPC Tubular Lock Saw.

screwdriver, and the shaft turned to unlock the mechanism.

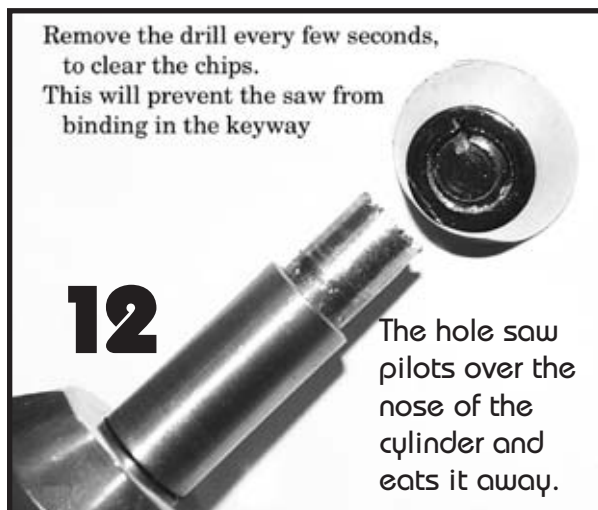
HPC Tubular Lock Saw

The HPC Tubular Lock Saw is designed to separate the rotating sleeve from the rotor shaft without

saw cut right through the drive pin and rotated the cylinder open in exactly 45-seconds. (See photograph 13.) By removing the cam from the rear of the cylinder, the rotor shaft can be pushed out the front of the cylinder. (See photograph 14.) The steel pin that fixes the nose in the rotor shaft can be seen in the photograph. The HPC saw is not recommended for cylinders that contain hard pins or ball bearings in the keyway.

A-1 Security, Tubular Lock Saw

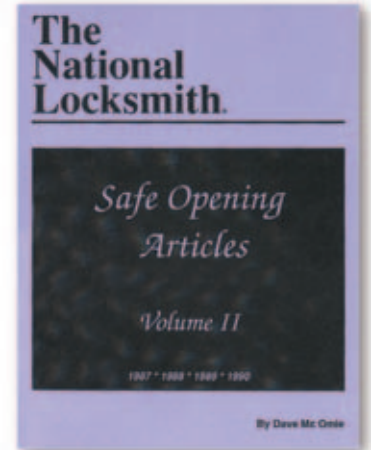
The A-1 Tubular Lock Saw uses a tubular saw pilot which fits over the nose of the cylinder and the saw removes the outer lip of the shell. (See Photograph 15.) The shell



12

The hole saw pilots over the nose of the cylinder and eats it away.

Safe Opening Articles



Dave McOmie's original articles from when he first started writing for The National Locksmith are reprinted in this book.

CLICK HERE TO LEARN MORE



#SA - 2

Cylinder is Turned

13



Time: 45 Seconds

The saw cut right through the drive pin and rotated the cylinder open.

The Shell has been milled away, exposing the combining pins.

16

The saw removes the outer lip of the shell.



dead pins in the keyway.

Each of the above tools present specific advantages for the locksmith. All of them have a place in the well-stocked tool box. Choice of the right tool for the specific job makes the job faster and more profitable.

For more information on either of the previous tools mentioned contact:

AABLE Locksmith

Phone: (718) 847-1377

Fax: (718) 847-0991

Circle 201 on Rapid Reply.

HPC Inc.

Phone: 800-323-3295

Fax: (847) 671-6343

E-mail:

HPC@HPC.WORLD.com

Web: www.hpcworld.com

Circle 202 on Rapid Reply.

A-1 Security

Phone: 877-725-2121

Fax: (804) 359-9415

E-mail:

FMCC@demenda1.com

Circle 203 on Rapid Reply.

TNL

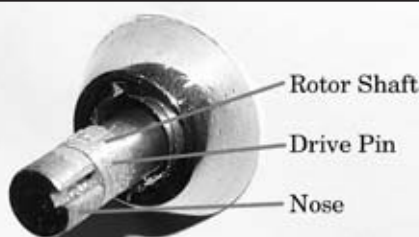
Cylinder is Turned

Time: 1 Minute; 45 Seconds

17

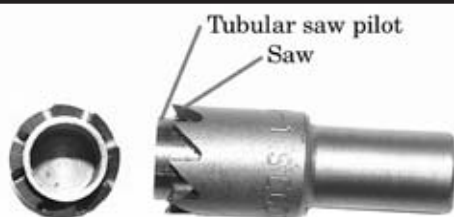
Tap the nose of the cylinder to vibrate the pins out the front.

To remove the pins tap the face of the nose with a small hammer.



The rotor shaft can be pushed out the front of the cylinder.

14



15 The A-1 Tubular Lock Saw.

Flat Rate Manual

The National Locksmith.

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For Locksmiths

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#FRM - 1

of most cylinders will be zinc alloy or brass, which is relatively easy to drill. The shell is milled away allowing the combining pins and drivers to be removed out the front of the cylinder. (See photograph 16.)

The A-1 tool is almost as fast as the HPC tool and avoids hard pins and ball bearings in the rotor. The rotor is left in tact after the cylinder is drilled. To remove the pins and drivers, tap the face of the nose with a small hammer. The pins will jump out the front of the rotor. (See photograph 17.) From the time I began drilling to the time the rotor turned was exactly one minute and 45-seconds. That's still pretty fast. The A-1 tool will not work on cylinders with

Quick Entry

UPDATE

by
Steve
Young



2001 FORD ESCAPE AND MAZDA TRIBUTE

There's an old saying that goes: "You can't tell the players without a program." When it comes to the new vehicles, that is becoming the literal truth. The transponder revolution has changed so many things so quickly, that even the most dedicated automotive locksmiths are having trouble keeping all the details straight. For those of us who only occasionally work on vehicles, an up-to-date reference manual is not just nice — it's a necessity. Books like the AutoSmart manual by Michael Hyde and the Fast Facts manual by Robert Sieveking are becoming indispensable. I personally keep both books on my desk at all times, and I refer to each several times a day when answering questions on our "Help Line".

The multitude of changes made by Ford in just the last six years have been enough to make some locksmiths think about getting out of the automotive field altogether. For example, Ford introduced the PATS-1 transponder system in 1996, on only three vehicles, but it was optional on all three. Two of the vehicles, the Taurus and Sable, used an 8-cut key blank, and the third, the Mustang, used a 10-cut key blank. Mid-year in 1996 however, the Mustang changed to the 8-cut blank. In 1998 Ford introduced the PATS-2 system, but only on selected models. At the same time, Ford brought back a 10-cut transponder blank, but disguised it to make it look like the 8-cut blank. Then in 1999 Ford made the PATS-2 system standard equipment on all Ford passenger vehicles. In 2000 Ford introduced the E-PATS system on four vehicles - but came out with three different E-PATS key blanks. Now in 2001, the E-PATS



1. 2001 Ford Escape.



2. The Keykert latch as seen from inside the door.



3. Insert two wooden wedges about eight inches apart.



4. Insert the tool into the door between the two wedges.

system is being expanded, and some vehicles are changing to the E-PATS system in mid-year. I got so frustrated that I put together a chart for myself of all of these changes — sort of a cheat-sheet. If you'd like a copy of this chart, you can download it from my web site at www.techtrainproductions.com.

The Ford Escape (see photograph 1) and the Mazda Tribute are just two of the new vehicles that are equipped with the E-PATS system. Both are essentially the same vehicle with minor differences in styling. The key blanks used by each are also identical except for the heads of the blank and the logo that is molded into the rubber head. Mechanically, these blanks are interchangeable; in addition, the Strattec 599179 blank, which is intended for the Mercury Sable, can also be substituted for either vehicle.

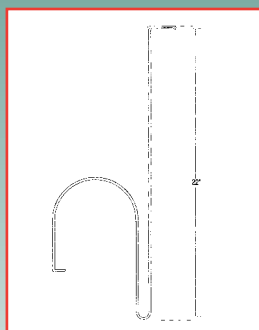
Texas Instruments manufactures all the transponders that are used in all the current Ford transponder key blanks including the E-PATS blanks. The E-PATS blanks use the new EST (Electronic Signature Transponder) transponder, also known as an "Encrypted" transponder. This transponder uses technology that is a direct descendent of military electronic encryption systems. As the patent holder on this technology, Texas Instruments is the sole-source provider of these transponders. They have made the decision to provide the latest EST transponders to Strattec Security Corporation only. The reason given for this decision is that Texas Instruments wants to "protect the technology." The practical side of this decision is that Strattec must make all key blanks for vehicles equipped with this system, and no "after-market" blanks will be available in the foreseeable future.

Both the Escape and the Tribute also use the Keykert latch system that was first used on the Lincoln LS (see "Quick Entry Update, October, 2000). This latch uses a single cable in place of both the handle and lock control linkage rods that are used on most vehicles. Attacking the latch is pretty much a waste of time. In addition, it is also dangerous because of the large bundle of wires that are extremely close to the latch's only vulnerable spot. (See photograph 2.)

The Escape and the Tribute can be unlocked with relative ease using the Tech-Train TT-1015 "Under-Window" tool. (See illustration A.) The weather-stripping on the inside of the door is

Quick Reference Guide

Vehicle: 2001 Ford Escape and Mazda Tribute	Security System: E-PATS (EST- Electronic Signature Transponder also known as "Encrypted Transponder")
Direction Of Turn: Clockwise	Code Series: 0001x-1706x
Tool: TT-1015 (under the window tool)	Ford Key Blank: Strattec 599114
Lock System: 8-cut Ford, sidebar ignition and plate tumbler (wafer) style door locks	Mazda Key Blank: Strattec 690212
	Bitting: Ignition 2-8, Doors 1-6



A. The Tech-Train TT-1015 tool.

**6. Lever
the inside
door
handle
out,
overriding
the lock
system.**

relatively tight, but no tighter than many other vehicles. The flattened top of the TT-1015 also helps the tool to pass the weather-stripping more easily than other types of "Under-Window" tools.

To unlock either the Escape or the Tribute, begin by wedging open the base of the window opposite the inside door handle. Use two wooden wedges inserted about 8" apart. (See photograph 3.) Insert the tool into the door with the tip of the tool pointed toward the front of the vehicle. (See photograph 4.)

Once the upper bend of the tool is below the bottom of the window glass, flex and lift the tool so that the upper bend slides up the inner surface of the window glass. As soon as you are sure that the tool is in position to be pulled up on the inside of the door, stop and remove the wedges from the door. It is very important to remove the wedges prior to pulling the tool up on the inside of the door. Failure to remove the wedges can result in breaking the window glass.

After the wedges have been removed, pull the tool up and into the passenger compartment of the vehicle. (See photograph 5.) Once the tip of the



5. Pull the tool up after the wedges have been removed.



tool is free of the inner weather-stripping, manipulate the tip of the tool until it makes contact with the back of the inside door handle. (See photograph 6.) Use the tip of the tool to lever the inside door handle outward, overriding the lock system and unlocking the door. The inside lock control rocker can also be attacked with the tool, but pulling the handle is much easier.

Levering the handle out will override the lock systems on the front doors of all Ford products that are equipped with the Keykert latch system and the earlier cable-operated system that is used on the Contour, Mystique, Cougar and Focus. The rear doors cannot be unlocked in this way because the override feature has been disabled to allow the child-safety system to work properly. All of these vehicles can also be unlocked with the Jiffy-Jak Vehicle Entry System.

For more information on Tech-Train products call: 800-356-0136; Fax: (850) 476-7410; E-mail: Techtrain@techtrainproductions.com; Web: www.techtrainproductions.com.

Literature & Brochures

Aable Locksmiths Catalog

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Framon Product Catalog

Framon's Key Machine and



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HES Literature

Headquartered in Phoenix, Arizona, HES, Inc. is a leading manufacturer of electric strikes, locking devices, and security accessories for the access control industry. Dominating the market in ingenuity and performance, HES has a global reputation for innovation, strength and service. A standard of being first to market with cutting edge products and services has made HES a complete source of electric strike technology.



For more information: HES, 2040 W. Quail, Phoenix, AZ 85027. Phone: (800) 626-7590; Fax: (623) 582-4641.

Buddy Products Product Catalog

Cash and Key management from Buddy Products, are a useful line of organizational and security products. For keys there are many types of boxes or cabinets, along with entire key filing systems. For cash, the products range from cash boxes and bill/coin trays to strong boxes and wall safes. Each is made from textured, recycled steel and finished with an enduring baked-on enamel coating. Most items are stamped,

Continued on page 66

Continued from page 64

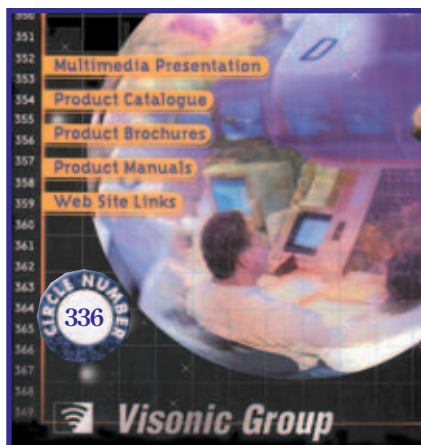


welded and finished by hand to ensure the highest quality.

For more information: Buddy Products, 1350 S. Leavitt, Chicago, IL 60608. Phone: (800) 886-8688; Fax: (312) 773-8356; Web: www.buddyontheweb.com.

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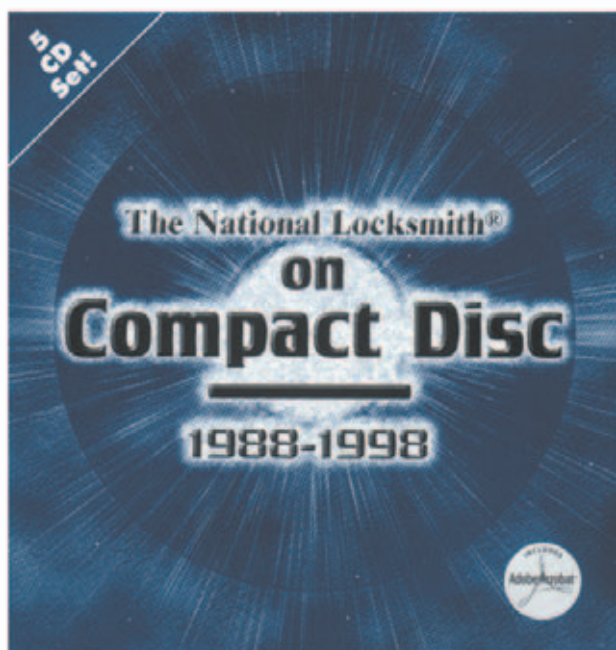
DORMA Architectural Hardware's catalog on CD includes the entire door closer, exit device and electronic



access product line. The catalog utilizes Adobe Acrobat and incorporates a means to easily review the catalog using a unique navigational bar. A search can be initiated by using a key word or phrase. DORMA's catalog can also be accessed by logging on to www.dorma-usa.com.

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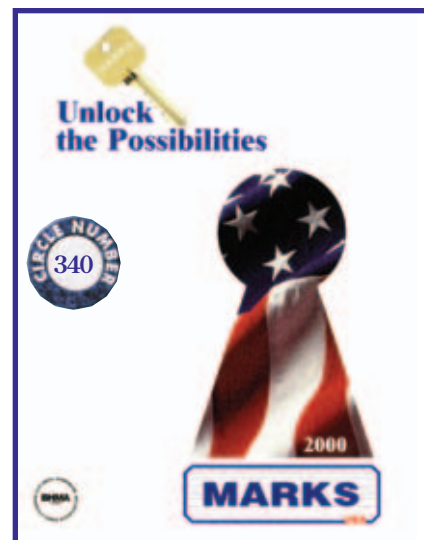
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BEGINNER'S CORNER

Servicing Floor Closers, Part 1.

by
**Raymond
Moreno**

I can't think of a better way to start off than by talking about something that the customer "must" call a locksmith for. Something that the everyday Home Depot and Ace Hardware and True Value guys don't do... service floor closers! Just follow along, and you'll see that it's not as complicated as you may think. You might even be surprised that they're so easy to work on, that you go out and line your pockets with your new-found wisdom. (Remember, knowledge is everything!)

In the following article, I will be covering a very common and popular style of floor closer: Rixson. A member of the Yale Security Group.

I will share with you how to recognize, adjust, and install these little puppies. (Oooo-Weeeee... I'm getting goose pimples already.)

And just to let you in on a little secret, there are huge profits in this type of work!

And now... on with the show.

Familiarization of Parts & Functions

To start off, let's familiarize ourselves with the different styles and models of Rixson floor closers. To start with, you'll need to know the different functions and applications that you can choose from. This will be determined by:

1. The weight of the door (very important).
2. The "look" the customer wants.
3. Whether the door is "offset hung" or "center hung".
4. The amount of traffic flow through the door.
5. Whether a "hold open" feature is desired.
6. The amount of swing needed.
7. Whether the doors are "single acting" or "double acting".

8. The amount of space available to work with during the installation process.

9. Weather the door is left-handed or right-handed.

After considering all the above criteria, you should be able to choose the proper floor closer for the application.

Rixson Closer

First off, let's see what the Rixson floor closer looks like. In *photograph 1*, there are three different models of

door — also features an "anti-friction bearing" for greater load capacity.

Closer #2, is the "27 Series" closer. This is the "offset hung" floor closer. As with almost all the other "Series" floor closers, the weight of the door, the amount of usage and the opening direction, will determine which model to choose from.

Closer #3, is the "28 Series" closer, with a 1/2" extended spindle. This is the "center-hung" floor closer. It is also the floor closer used for installations with a "Terrazo Pan".

More on that later.

Before I go any further, let me "edumacate" you on a couple of things first.

1. There are different models to choose from in every "Series." Using the 27 Series as an example:

H27: 3/4" offset. For extra heavy doors (up to 800 lbs.), sizes up to 4'0" x 8'6".

FH27: 3/4" offset. For fire door assemblies up to 3-hours.

L27: 3/4" offset. For lead-lined doors (up to 1500 lbs.), sizes up to 4'0" x 8'6".

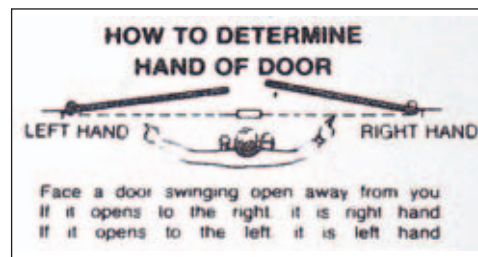
HM27: 3/4" offset. For hollow metal doors (up to 250 lbs.), sizes up to 4'0" x 8'6".

To name every model for every series, would take-up way too much space. So I strongly recommend that you contact a Yale Security representative and request a Rixson floor closer catalog to familiarize yourself with the different models.

2. The "handing" of the door is determined by the way the door opens when pushed away from you. As an example: If, when pushed, it opens to the right, it's a right-handed door. If, when pushed, it opens to the left it's a



1. Three different styles of Rixson floor closers.



2. A door handing chart.

Rixson floor closers. Each one has its own specific use.

Closer #1, is a heavy-duty closer. It is intended for lead-lined, extra-heavy doors. (From 1000 to 1500 lbs., depending on the model.) Notice that it has a longer "spindle" with which to mount the door on. This is designed to create a sturdier hold for the heavier doors. The bottom arm — which mounts on the underside of the



3. An offset hung door, means the pivot point is not under the door.



4. Here we have a "40 Series" double acting floor closer.

left-handed door. (See illustration 2.)

3. If the door only opens in one direction, it is a "single acting" door. If it opens when pushed or pulled, it is a "double acting" door.

4. Another important thing to know is whether the door is "offset hung" or "center hung." If you look at the floor closer in photograph 3, you will notice that the center of the spindle (the pivot point) is not under the door, but actually 3/4" in front of the door. This is a 3/4" offset. If the pivot point was under the door (no spindle visible in front of the door), it would be a "center-hung" door. As a side note, "offset" closers are always handed. You must order the closer for either a right-handed or a left-handed door.



5. The "adjuster discs" are for the adjustment of the spring tension.

5. You can choose the "degree of opening" that you want the door to open. Most of the floor closers can be ordered with 85, 90, 95, or 105 "degrees of opening". 90 and 105 degrees are the most common.

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Now that we got that out of the way, let's look at some other goodies.

Closer Features

In *photograph 4*, is the "40 Series" floor closer. This is the "double acting" closer. Once again, these are made for doors that open with a "push or pull" action. Notice the two Aztec Sun looking circles. (See *photograph 5*.) Those are the "adjuster discs." Each disc is for the adjustment of the spring tension on the closer. One is to adjust the "pulling" tension and the other for adjusting the "pushing" tension.

Photograph 6, is a close-up of a "27 Series" closer. If you look to the right of the spindle, you will see the manufacturing date stamped on it. The "RH" means that it is a right-handed model. You will also notice that the adjustment screws for the "latching speed" the "closing speed" and the "backcheck" are clearly marked. The last adjustment screw is for the "hold-open" function. The "hold-open" function is optional. This function allows the door to be held open at the specified degree of opening that the floor closer was ordered for. The huge pancake-looking circle in the middle is the "adjuster disc."

If you look at the bottom of the closer, you will see another label with more information. The number "27" pertains to the "Series". The number "105" tells us

how far (in degrees) the closer will allow the door to be opened. The letter "S" tells us that it has a "Selective" hold-open. You can "Select" to turn the "hold-open" feature on or off. And of course, the "H.O." on the bottom of the label means, "hold open".

Now we know that this is a "27 Series" closer with a selective hold open feature that will open, and hold open, the door at 105 degrees.

As a side note: Instead of the letter "S" (Selective) it could also

have had the letters, "NHO" or "A" on the label. The letters "NHO" stand for "Non Hold Open". Indicating the closer does not have the hold-open feature. The letter "A" would stand for "Automatic". Meaning it would automatically hold the door open. You could not turn-off this feature.

Styles & Finishes

Now let's familiarize ourselves with the different looks that we can choose from. In *photograph 7*, are some different styles and finishes of floor plates that are offered. In *photograph 8*, you can see what a chrome-finished floor plate with a "center hung" glass door looks like.

Remember the weird word "Terrazzo Pan?" Well, if you look at *photograph 9*, you will see an installed floor closer using a "Terrazzo Pan." The floor closer will come with a deep pan (a Terrazzo Pan) and a longer spindle. The pan can be up to 2" deep, depending on what materials you want to use for the surface. The spindle can be ordered from 1/2" to 2" longer, also depending on the depth of the pan. Once installed, you will only see the spindle sticking out from the floor. There are no thresholds or floor plates used with this type of installation. You can literally tile, cut stone or chisel marble directly over it. Now you can understand why the spindle must be longer for these models.

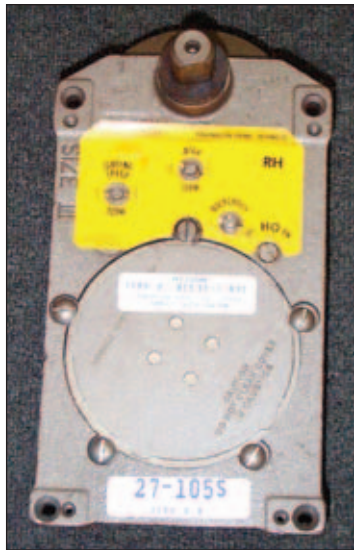
Photograph 10, shows a common threshold. These can be ordered directly from the manufacturer or purchased separately. They are relatively inexpensive and can be found in almost any builder's hardware store. Because they're usually made of aluminum, they are easily cut to shape. I've also seen them made of bronze and those can be a bear to cut.

The last three things that we need to cover are the cement cases, the pivots/hinges and the bottom arms.

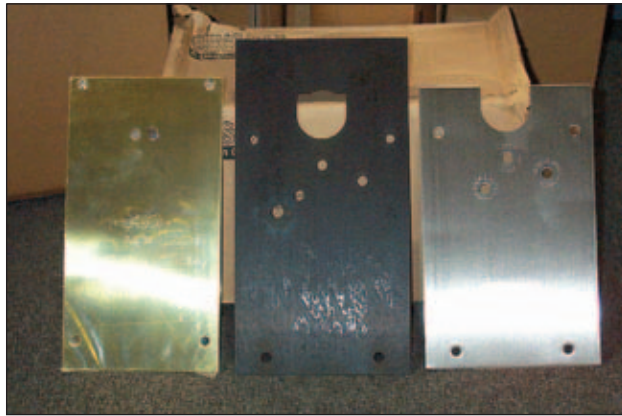
Cement Cases

Unless you haven't noticed, floor closers are mounted in the ground, concealed. The cement cases are meant to be grouted (cemented) into the ground and the floor closer installed inside it. This doesn't mean that you'll be doing this type of work. But, it's always good to have this

Continued on page 74



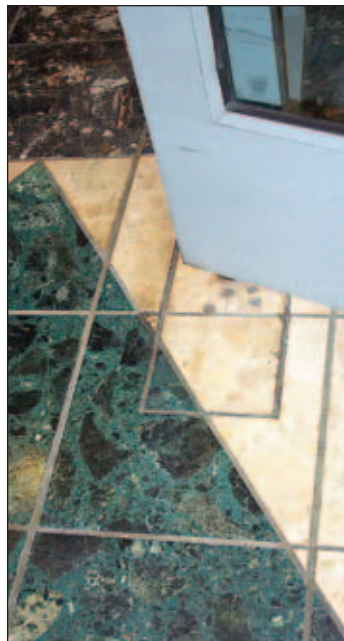
6. The closer will yield much information if you know how to interpret it.



7. A variety of different floor plate styles and



8. A "center-hung" closer on a frameless glass door with a "floor plate" installed.



9. This "Terrazzo Pan" installation shows the touch of a true professional.

Continued from page 72



10. Here we have a threshold application.



11. The "twin" cement case with its close relative for the "double acting" floor closer.



12. The standard "27 & 28 Series" cement case.



13. A close-up of the cement case anchor.

knowledge.

In *photograph 11*, is the cement

cases for the "double-acting" closers and the "back-to-back" mounted closers. Twin cement cases are made this way because there must be a specific space between each closer when mounted in this back to back fashion. The "double-acting" cement case is made of steel, while the other cement case is made of "cyclocac". A hard, yellow plastic-like material.

Photograph 12, show the cyclocac cement case commonly used for the "27/28 Series" floor closers. Notice that the cement case still has it's covering in place. This covering serves a purpose, but we'll talk about that at a later time. Notice the "anchors" in *photograph 13*. These are meant to help secure the case when the cement mixture is poured around the case.

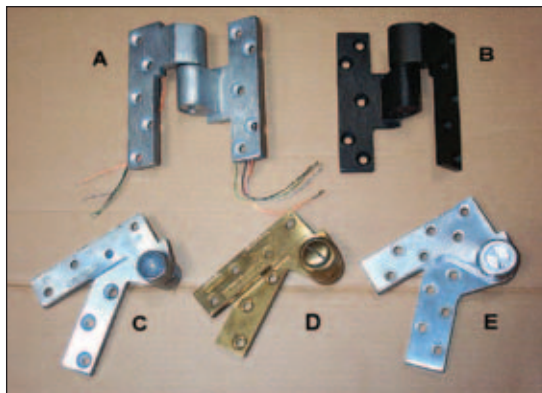
Pivots & Hinges

Now let's look at the pivots and hinges. In *photograph 14*, you can see a variety of different pivots and hinges. At the top of the photograph we have what is called "intermediate pivots," commonly known as "butt hinges". The three pivots at the bottom of the photograph are called "top pivots" used with offset hung doors.

As you can see, the two "butt hinges" are just about the same. The difference being that the "A" hinge (E-M19) is electric, while the "B" hinge (M-19) is not.

Photograph 15, show a door with a butt hinge installed.

These hinges are also great for repairs of sagging, heavy



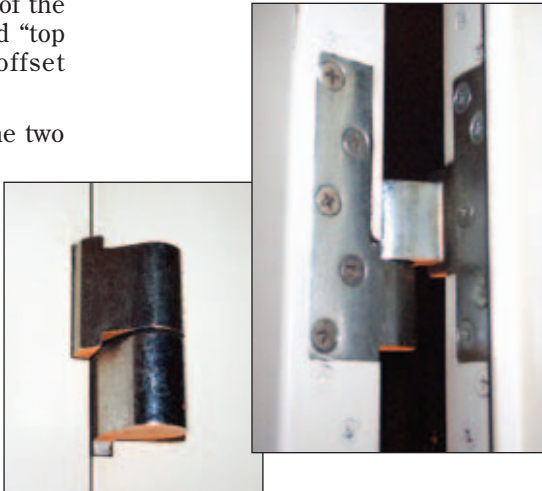
14. A variety of "butt hinges" and "top pivots."



15. A butt hinge mounted on a door.

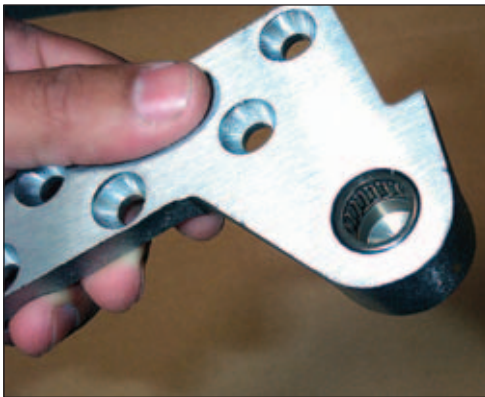
doors. (See *photograph 16*.)

As for the "top pivots" they also come in different styles. Pivot "C" in



16. These butt hinges are also great for repairs.

Continued from page 74



17. The “needle bearings” on the L-180 heavy-duty top pivot.



18. The top pivots for the “center hung” doors.

photograph 14, is the newer 3/4” offset pivot. It is non-handed and can be used on either a left or right-handed door. Pivot “D” is the older style top pivot and is a “handed” top pivot, easily recognized because the big screw is always mounted on the bottom side. Pivot “E” is the heavy-duty L-180. It is used for lead-lined doors. If you look at *photograph 17*, you will see a close-up of the needle bearings in the L-180 top pivot. This helps to reduce friction and wear.

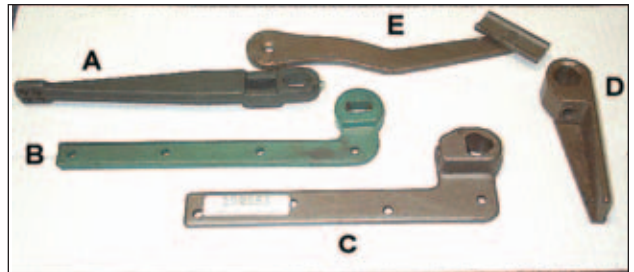
We’ve discussed “offset hung” top pivots, but what about “center hung” top pivots? In *photograph 18*, you will see the model 340 top pivot that is used with a center hung door. As you can see, it is a two-part pivot. The top piece gets mounted onto the “header/jamb” of the door, and the bottom piece is attached to the top of the door itself.

Bottom Arms

Lastly is the bottom arms. These are mounted to the underside (or in some cases to the front) of the door itself. *Photograph 19*, shows a variety of different bottom arms. “A” is a

bottom arm for a “center-hung” door. “B & C” are two different styles of “offset” bottom arms. “D” is a surface-mounted “offset” bottom arm. Thru bolts are used with this application. And “E” is an “independently hung” bottom arm. This is used only with special butt hinges made to support “vertical” weight. The “D & E” bottom arms are used to allow either easy access to the floor closer (for maintenance or adjustments) without having to remove the door, or where vertical (up and down) movement of the door would be restrictive during the installation.

Well, there you have it, all the information on parts for the Rixson floor closers. In the next segment, I’ll take you with me as I remove a door in preparation to



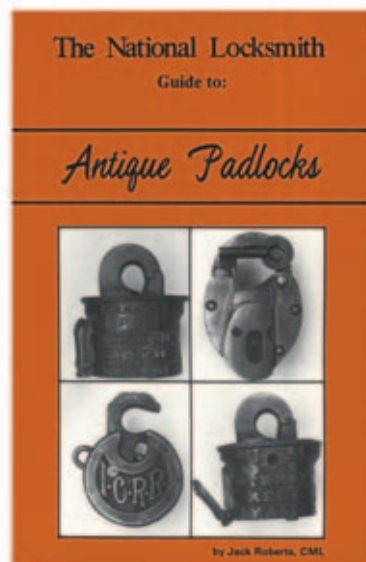
19. Here is a nice variety of bottom arms.

replace a floor closer. I’ll also show you how to remove a floor closer and disassemble various styles of Rixson top pivots. You’ll need to know how to do this to remove a door.

I couldn’t possibly leave without saying “muchas gracias,” to the floor closer guru’s: Andrew Pokorny, and Diane Oakes, from Closer Repair & Door Hardware, 699 Fourth St, Oakland, CA 94607. (510) 536-9177. They are also the Rixson/Norton factory authorized Service & Repair station, for the San Francisco Bay Area. They were great in sharing their wealth of knowledge and showed a tremendous amount of patience with this dumb city-boy wanting to photograph everything.

TRL

Antique Padlocks



Finally there is a book to give you all the information you need about old interesting locks.

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#PAD - 1

The UGHTER Side

A Matter of Recognition



by
**Sara
Probasco**

Thanksgiving weekend is always a busy time for us, but last year's was the busiest ever. Any time we have several consecutive packed days like that, we're bound to get some strange happenings thrown in. Sometimes I think God exercises his sense of humor that way just to break the monotony and keep us on our toes.

In the middle of chaos at the store, a man brought key-code numbers in to have us make a set of keys for his Chevy Cavalier.

Don looked up the codes and found there was more than one key-blank possibility. Some vehicles of this make and model were outfitted with Alpha Tech ignitions, requiring a large, two-sided key, whereas others had standard GM ignitions that used standard GM primary keys. Without knowing which this vehicle had, cutting the key was a hit and miss proposition.

"Do you remember if the ignition key was larger than usual and had notches cut on both sides, or was it a standard General Motors key cut only on one side?" Don asked. He held up two key blanks in his hand: one standard GM key, and one Alpha Tech key.

"I know it was only cut on one side," the man said firmly. He pointed to the smaller key. "It was a little key, like that."

"You're sure? Because this vehicle might take either one."

"I'm positive."

Don cut keys for the man, took his money, and gave him our usual "closing pitch" encouraging him to try the keys as soon as possible and assuring him that we guarantee our keys.

The man thanked him and left.

A few minutes later, he was back again. Don was busy, so Harold waited on him.

"The door keys works fine," he told Harold, "but there's something wrong with the ignition key."

"Is it hard to turn?" Harold asked.

"It won't even go all the way in," the man replied.

"Then, most likely, it was cut on the wrong blank. I would guess it takes the big, two-sided key." He pulled an Alpha Tech key off the board.

"No, the other man asked me that, earlier, but my old key was only cut on one side, and it was a small key, the same size as the door key, only square at the top."

Harold came into Don's office, told him what the man had said, and asked his advice.

"Put a half dozen General Motors key blanks on one of those 'gimmie' rings for him to take and try in his ignition. Be sure one of them is the Alpha Tech key," Don said quietly.

"But he says he knows it takes a standard GM primary key," Harold protested.

"That's okay. Give him the big one along with the others, anyhow, and ask him to be sure and try them all."

The astonished customer returned to the store a little while later and sheepishly admitted Don had been right in the first place. The large, two-sided, Alpha Tech key was the one required, not the "little one-sided, square top" GM key that he was so sure he "remembered". Chagrined though he was, he was also impressed at our knowledge and patience. It takes so little to make them happy.

Late that Saturday evening, I took a call at home while Don was thirty miles up-country opening a locked vehicle.

"We need some help right away," the woman wailed. "Mr. Brown, the man who owns ABC Café, is out of town for the holiday and asked us to feed his pets, but the key he gave us won't open the door. It worked fine before, but now it won't turn. Can you send somebody to let us into his house and maybe make us a new key? Oh, and you'll need to charge this to Mr. Brown. Okay?"

Hmmm, I thought. Saturday night. The tail-end of the long Thanksgiving

weekend. Supposing this is on the up-and-up, how come they're just now discovering the key doesn't work? When did the owner leave town? Wednesday evening? Thursday morning? Have the poor pets gone without food and fresh water ever since? But if they are potential thieves, what gall, to call a locksmith to help you break in and ask that the charges be billed to the victim!

I said, "The locksmith on call is up-river getting somebody into their car and won't be back for thirty or forty-five minutes. If you'll give me your phone number, I'll have him call when he returns and you can meet him at Mr. Brown's house then."

"Oh! Well, right now we're at the grocery store, just across from the café. (The owner lives in a little house directly behind his café.) It'll probably take us that long to get our groceries, so just have him call our cell phone. Oh, and let me give you a phone number where you can reach Mr. Brown too, in case you want to check with him about this."

I got both numbers. After a few minutes, I tried to call Mr. Brown. He was vacationing in California, but she had given me his cell-phone number. He was supposed to be "reachable" twenty-four hours a day. There was no answer. Well, no human answer. Actually, I got his voice mail and left a message telling him the name of the person who wanted into his house, the reason they had given, and asking him to return my call to authorize our letting these people into the house, in his absence. Otherwise, I told him, we would not open the door for them.

To this day, we have heard nothing from Mr. Brown. No authorization to let them in, no "Thanks for looking out for me and my property while I was away," no "Next time, mind your own business," nothing!

The woman called back just before Don got back. She said Brown had apparently given them the wrong key, but they had located someone else who had a key that worked, so they

wouldn't be needing us, after all. I wondered if Brown had called her with information about where to get another key instead of returning my call, but she didn't say, and it really didn't matter. By that stage of the holiday weekend, I was glad to avoid any and all potential hassle from any and all sources.

"It doesn't make a lot of sense," I told Don later. "First she hinted that she'd been taking care of the pets all weekend and suddenly the key wouldn't work. Then she indicated that Mr. Brown gave them the wrong key in the first place, but they found somebody who had the right one."

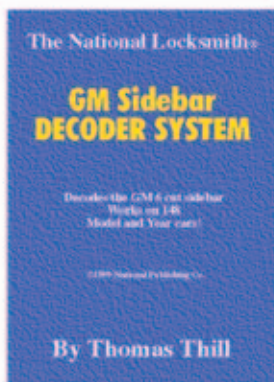
Don shrugged. "If I know Brown, he deliberately gave them the wrong key to see how long it would take them to discover his 'mistake.' That way, he would know if they were taking care of his pets the way they were supposed to. He just didn't figure on them having access to another key."

"Is that anything like providing the key to a mystery?" I asked, adding a little "Ha, ha," on the end.

Don grimaced. "If you ask me," he said, "the whole thing is more like the little boy who dropped his bubblegum in the henhouse. Confused!"

TNL

GM Sidebar Lock Decoder System



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#TT - 1

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#ASA - 2002



by Dale W. Libby,
CMS

Getting paid is the fun part of Safecracking. The work of cracking, drilling, manipulation, and overcoming all secrets of a safe are also rewarding, but the money, the payoff, is the most important to me. That is why I make payment policies strict and stringent, and I let the customer know in advance what to expect.

Sometimes, however, you must bend a little for the customer. If they do not like my exacting and authoritarian attitude about COD, then other arrangements can be made. Certain customers, who have given me payment problems in the past, are strictly "Cash on Demand". I, like an elephant, have a long memory for people that have not paid me in a timely manner. I would rather refuse a job than have to repeatedly call, fax, and make a nuisance of myself. I am tired of hearing about "Lost Invoices" and payment schedules, and filling out duplicate W-4 forms before my company can be paid.

When it comes to being paid, I am like a pit bull. I hang on and bite till I get my payments. This is fine for local safecracking (and locksmithing too), but there comes a time when you will have to deal with National Service Providers (NSP). I will refer to them hereafter as NSP's.

An NSP is a company that handles maintenance for a large chain of stores, and they are usually located in one place that handles all the stores in the United States. Unfortunately, the area location is typically on the East or West Coast, or in Texas. These locations are not close to Elgin that is 40 miles northwest of Chicago, Illinois. If they do not have either an 800 or other toll free number, then phone harassment is out. Fax harassment is another thing altogether. I use the money saving prefix dialing for that, you know the 10-10 plus numbers.

I am not putting down all NSP's, for I do work for several that pay quickly and fairly. Once you get into their system, payments will follow quickly. However, there are other NSP's that are cavalier with payment options, and seem to keep their money for 90-days or more. I cannot deal with this anymore, so I have started to use a form, which I received from a friend.

Put in simple terms, the form must be signed by the customer that the NSP sends me to. It states that if the NSP does not pay in the suitable time agreed upon, then the customer will pay the bill. It is a little more complicated than that, but that is the gist of the matter and the form. This form was sent to me and is from Kevin (?). I lost Kevin's last name, but thanks for letting me use the form.

Before going into the form itself, please remember that you, the professional safe technician (hereafter known as Safecracker) will set the price for services and parts rendered. Sometimes the NSP will provide a new lock, dial, or other part that is needed, but you, as the workman, will supply the price. Your price, not theirs. This fact should be remembered when working for a factory on warrantee work. Most manufacturers will set incredibly low prices when asking you to perform Guarantee work. You do the work, you set the price. Do not shortchange yourself. I have, and I do not like it.

The following is a copy of the form I use:

I WANT TO GET



PAID!

SafeBusters Libby Safe and Lock Company
PO Box 175
Elgin, IL 60121-0175
Telephone (847) 888-4044
Locksmith License 191-000148
Contractor License Number 456789

Third Party Payment Agreement:

The national Service Provider designated herein has contacted Libby Safe & Lock (as an independent contractor) to provide the materials and services (specified on our invoice) to you. This NSP has represented to us that they have a contract to supply such materials and services and that as part of that agreement they have the right and obligation to assign the provision of those services to other entities in your local service area when these services cannot be provided directly by the NSP.

In order to insure prompt payment of our invoices, thereby reducing our operating costs and ultimately the cost to the consumer and user of our services, payment for materials and services and services rendered must be guaranteed by the end user of those materials and services. In good faith, we hereby agree to perform the services and/or provide the materials, and we will invoice the National Service Provider and/or third part payer at your request, regardless of that party's past credit history or the lack thereof, but the legal and financial obligation and

responsibility for payment to us is that of the end user. We are an independent service provider and we are not party to any agreement you have with the third party payer or National Service Provider described below.

If you choose to do so, you may pay our invoice, in full, at the time it is presented. In which case we will send no invoice to your NSP and you will not be obligated to us any further.

Notice is hereby given that if our invoice for goods and services is not paid by the third party you have designated below within thirty days of the Invoice date, as you hereby request, you are legally obligated and required to pay for the materials supplied and services rendered to you, in addition to any and all bookkeeping and processing fees, travel time, and other collection expenses subsequently incurred by Libby Safe & Lock - SafeBusters to collect said amounts.

Upon written or verbal notice from Libby Safe & Lock - SafeBusters, that the third party has not made payment in accordance with the terms and conditions of our invoice, you as an authorized agent of the owners and/or management of the business entity named and described below, hereby agree to pay all amounts due, as described above, upon demand and in lawful U.S. currency or such other method of payment which is acceptable to the representative of SafeBusters. A receipt for the amount paid and/or a copy of the Libby Safe & Lock - SafeBusters original invoice will be provided to you at that time. Subsequently, should duplicate payment arrive from the third party payer, it will be returned to the sender via U.S. mail.

In order for us to process the claim for payment with your National Service Provider and/or third party payer, the following information and certification is required.

End User: _____

(Owner or Lessee of equipment to be serviced)

Model Number: _____ **Serial Number:** _____

Date of lease/purchase: _____

Location of requested Service : _____

Store Number: _____

Manager's Name: _____

Address: _____

Contact Person: _____

Employee Number: _____

Store Telephone Number: () _____

Billing Address: _____

Name: _____

Street: _____

City: _____

State: _____ **Zip:** _____

Billing Information for Third Party Payer (NSP)

Company Name: _____

Address: _____

Street: _____

City: _____

State: _____ **ZIP:** _____

Contact Person: _____


Telephone Number: (Toll Free) _____

Purchase/Work Order/Authorization Number: _____

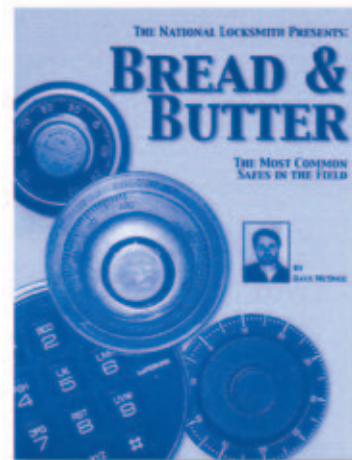
I, _____, as a duly authorized agent or representative of _____, hereby certify that I understand and agree to all of the terms and conditions described herein.

Signed _____ Title _____ Date _____

Authorized Signature _____

Once you make the NSP and the end user aware of the specifics of the form, the payment will follow shortly (hopefully). This form has worked well for me. Most NSP's are reputable and will pay on time. Those that do not, will not get service from my company. Open, describe and have the customer sign the above agreement, and hopefully you will prosper! 

Bread & Butter



Now here is one
amazing value!

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#BB - 01

Want More Business? Ask For It!



by Robert John Reynolds

I set myself the goal of trying to create new business. What I wanted to go after was work that was already being done by companies who weren't locksmiths, such as contractors or carpenters. I tried a lot of different ideas. Some worked better than others. Here's what happened: it grew my business, and you can do it too.

New Installs

The carpenters and contractors seem to have this sewed up. I've called dozens of contractors and brought cards to offices trying to get in on a 'bid,' but I can't seem to get past square one. I've even got a little strategy — break-even on the first job or two just to get my name into that arena, then up the prices a little after the first job or two.

When I pass a sign that says "XYZ contractors, 555-1212" in front of an empty lot, I call it, but everyone always says, "We don't subcontract lock installs out. We do it ourselves."

I then ask, "What about the rekey when the building is finished, to take it off of the contractors key?" "I can set it up on a formal key system."

"Sorry we are just the contractor,

you'll have to talk to the developer about that."

"How can I get in touch with them?"

"We can't give that information out."

This doesn't deter me, I'm going to keep at it.

New Business Report

Our parish lists all of the new businesses that have filed for licenses. The list doesn't include a phone number, but 411 has many of these numbers. I call them up and ask if they would mind if I brought them a business card? Most don't mind.

I'm running about 75-90 calls every two-weeks, as well as training new employees, backing up technicians and locksmiths as well as running two different major metropolitan cities. I find it hard to hit everybody on the list, but will at least try to call 20% of them and drop cards. I prioritize and call the ones that seem like they would be more concerned about security. This isn't always possible. I'm still working on the list from November and have got December and January stacked up. I've still need to get the February list and start working on that as well.

Most of these companies don't have an established locksmith that they work with, so they are a little easier to 'walk-in-on' than straight cold calling. Cold calling is tough for me. I really get bothered by the 'cold shoulder,' but I used to do 20 or so 'door to doors' every Tuesday. I still put on a suit once a month and start from one end of a major road and go business to business until I get hungry. Then I eat lunch. After eating I keep working until it gets close to five or so. Tuesday is one of my 'off' days so I try to get home early to spend time with the family.

I love hearing over the radio, "We have a caller from ABC cleaners who needs keys made for their car." Especially when I know I just gave them a calendar only days before. When I show up on the call I walk in and say hello to the clerk and thank them for referring the customer.

I try to cold call like this every Tuesday, because just one day a month can be very productive. On my last Tuesday jaunt I passed out 45 'register' calendars, 25 locksmith division stickers, and about 10 Medeco "Not all locks are created equal" brochures.

I can usually tell how far I am going to get when I walk in the door. If the business is real busy (don't go to

restaurants at lunch) you might get to hand them a calendar, but no one is going to discuss the merits of key control with you. It's usually pretty easy to recognize managers because they usually wear different style shirts. I try to approach them rather than counter help. For one it attracts less attention to the interaction and just seems to go smoother.

Manager Scenario

"Hi, how are you doing today?"

"Fine how about you?"

"I'm doing well, thanks."

Then there is a pause and the "what do you want" look follows.

"My name is Rob and I'm a locksmith here in Baton Rouge and I wanted to let you know that we are available to provide locksmith service to your business. This is my card and this is a sticker with our contact numbers. We recommend you put one on your safe or near your phone for prompt service."

"OK, thanks Rob. We'll keep you in mind if someone locks their keys in the car."

"Thanks and remember that we open car doors for free if a child is locked inside and we give that top priority as well. However, we do a lot more than open car doors now. We can do any sort of lock work you may need. Especially if you need to change locks when you lose and employee."

"Oh, we just changed the locks a few weeks ago."

I then hand him the Medeco pamphlet.

"That can get expensive, this (pointing to pamphlet) is Medeco. It can help eliminate a lot of key problems. Thanks for your time, I know you are busy, but if you need any help with anything locks, keys, electronic locks, safes or high-security products, anything like that let me know."

"Sure, thanks Rob, I sure will."

This takes about 1 minute. Try it. 1 minute and 30 seconds if you take your time. After you get to the 5th or 6th store you will have your delivery down. The hard part is not feeling like a cheesy car salesman.

I feel a lot more stress doing cold sales calls than doing locksmith service. Running 16 calls on a shift is just a rush, by the end of a 'cold call' day, I feel like I've been run over. But it has to be done.

This isn't just talk. Try it and I think you will find that it really works. **TNL**

THE GLASS MASTER System

by Tony Vigil

A solution to the frameless window problem.

Today's automobiles are becoming more and more complicated: computerized engines, fuel systems, navigation systems and some vehicles even sport as many as eight on board computers to control everything from the radio to the Air Bag systems.

Automobile lock mechanisms have also undergone major technological changes, which is designed to appeal to crime weary consumers. However, in the end they tend to make things more difficult for the locksmith.

In addition, the actual locks and linkages themselves have undergone major transformations. An increasing number of vehicles these

illustration A.) The Inside Access Tool bypasses the linkage and goes directly after the button or door handle itself.

There are, however, some limits to the use of Inside Access type tools. Specifically, cars with frameless windows including convertibles and even some sedans do not allow room for "under the door" type tools. In many cases, vehicles with frameless windows use the upper portion of the door to support the window. The windows are held by tight weather stripping to provide stiffness and prevent air leaks.

(See illustration B.) This special wedge is composed of two high-density wedges, sandwiched between high-impact polycarbonate composite material. The wedge materials were carefully selected to be flexible, but strong. The plastic is stiff enough to wedge any window, but has sufficient "give" to allow the flexibility necessary for such a delicate opening.

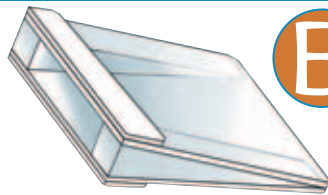
Polycarbonate is the core material used in many bulletproof glass windows. While the material is thin and flexible, it is incredibly strong and durable, as bulletproof glass must be. For purposes of an auto opening, the key word is 'thin' since the idea is to spread the glass as little as possible while creating just enough room for

HIGH TECH TOOLS NUMBER 35 INSIDE ACCESS TOOL.



A

THE GLASS MASTER WEDGE



B

THE LONG REACH TOOL.



F

A SOFT WOOD WEDGE.



E

2 POLYCARBONATE SPREADER RODS.



C

2 POLYCARBONATE STRIP SAVERS.



D

days employ cable controlled lock systems, which, in many cases, defy conventional auto opening tools and methods. Cabled vehicles require special custom made tools, which bypass linkages and go right for the door locks inside the vehicle.

The High Tech Tools #35 Inside Access Tool, is the correct solution for many of these automobiles *(See*

This tight fit makes it virtually impossible to safely insert an "under the window" tool in the door.

While directly targeting the door lock button or handle is the best course of action, the risk of nicking and breaking the window glass with a hard steel car opening tool is too great of a chance to take. Once again, however, new technology has given way to tools designed to beat the new technology. High Tech Tools has designed a solution to the frameless window problem with the new Glass Master System.

The Glass Master covers every angle of the above mentioned problem with as complete a system as anyone can find. The heart of the system is the Glass Master Wedge.

the tool. The thin material allows for insertion of the opening tool while protecting the customer's auto glass from contact with the metal tool, avoiding a broken window.

The Glass Master System uses two polycarbonate spreader rods to expand the opening in the wedge *(see illustration C)*; two polycarbonate strip

G

HIGH TECH TOOLS CABLE PULL TOOL.





WEDGING BETWEEN THE DOOR GLASS AND THE CONVERTIBLE TOP.

the simpler openings ever performed. The major benefit is the peace of mind knowing this opening can be performed without fear of making the glass door a victim of the operation. In the end, this not only saves glass windows, it can also speed up openings, as the locksmith is not concerned about breaking the glass.

Depending on the type of vehicle you have, insert the Glass Master wedge between the front door

Once the spreaders are in place use the long reach tool to unlock the vehicle. (See photograph 3.) The long reach tool is made of a special material which is strong enough to move the toughest linkage, yet flexible enough to be manipulated into the door and reach any part of the inner door lock handle or electric lock button. (See photograph 4.)

The tool has a plastic tip to protect the interior of the vehicle while providing additional gripping power. (See photograph 5.) The other end sports a handle offering grip, power and control.

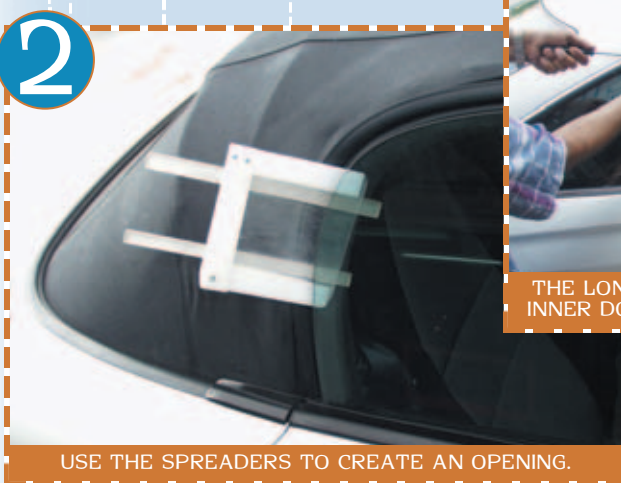
For vehicles with frameless windows and vertical buttons (instead of door lock buttons deep in the door), the High Tech Tools cable pull tool is designed to hook and unlock vertical lock buttons and even pull door handles. (See illustration G.)

As technology advances, the need for the newest tools grows. Always have the right tool for the job. Keep abreast of changes in the industry and have a good, accurate and current set of high quality auto opening tools. You will be glad you did.

savers to protect the weather stripping (see illustration D); a soft wood wedge to help manipulate and gain extra room where needed (see illustration E); and of course, the long reach tool to get to the door handle or lock button. (See illustration F.)



THE LONG REACH TOOL CAN REACH ANY PART OF THE INNER DOOR LOCK HANDLE OR ELECTRIC LOCK BUTTON.



USE THE SPREADERS TO CREATE AN OPENING.

For all its effectiveness, the Glass Master System really is not very complicated. In fact, it is probably one of

and rear quarter glass or door pillar. On this particular vehicle we are wedging between the door glass and the convertible top. (See photograph 1.)

Notice that the Glass Master is actually inserted at an angle. That is because you only want to create the smallest gap needed to insert the tool.

Given the angle of the wedge, the opening tends to be larger at the top of the glass than at the bottom. Inserting the wedge at an angle evens out the opening, while spreading the glass just enough for the tool.

Next, use the spreaders to create an opening in the wedge's shields. The spreaders are not moving the glass, just making a comfortable opening in the shields. (See photograph 2.)



USE THE LONG REACH TOOL TO UNLOCK THE VEHICLE.



THE TOOL HAS A PLASTIC TIP TO PROTECT THE INTERIOR OF THE VEHICLE.

For more information, contact High Tech Tools, 1400 SW First Street, Miami, FL 33135. Phone: 1-800-323-8324; Fax: (305) 541-0074; E-mail: tv@hightechtools.com; Web: www.HighTechTools.com. Circle 227 on Rapid Reply.



THE CASH STATION

by Mark Daniel

NCR 5885 ATM

ATM Manufacturer:
NCR 5885 ATM
ATM Model #:
Class 5885, Model #0101



Safe Size:

22" wide x 35-1/4" high

Door Size:

20-7/8" x 34" high

Handle Type:

L-style

Handle Location:

Below and to the left of the dial.

Handle Rotation:

Clockwise to open.

Dial Location:

11-3/4" down, 4" right of opening edge.

Number of Door Locking Bolts:

One 17" steel bar

Door Locking Bolt Locations:

9" to 26-1/4" down from top of door, 1-7/8" from door face.

Door Locking Bolt Diameter:

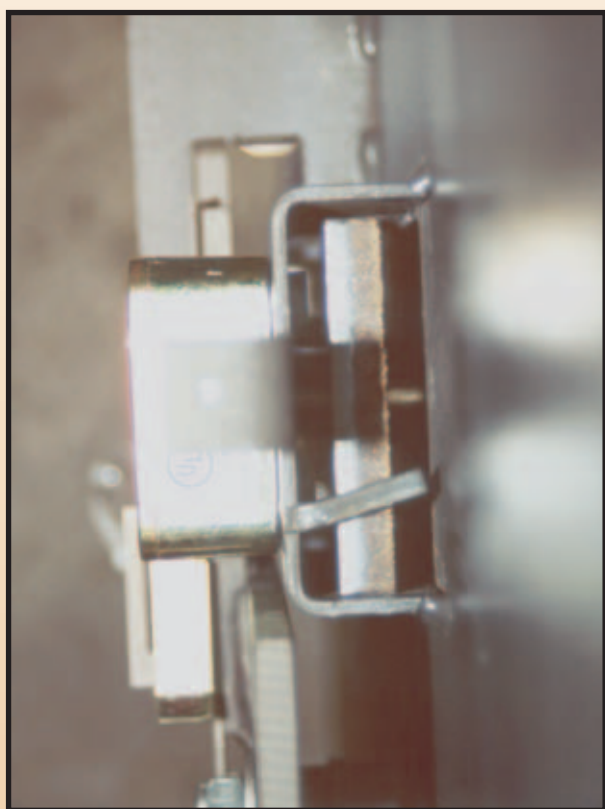
5/16"

Door Thickness to Bolt Center:

1-7/8"

Door Thickness to Lock Case:

1-3/4"



NCR 5885 ATM

Door Thickness to Back of Lock:
2-7/8"

Combination Lock Type:
LaGard 3332

Combination Lock UL Rating:
Group 2

Combination Lock Description:
Three wheel, key-changeable combination lock.

Combination Lock Case Thickness:
1-1/8"

Number of Wheels:
3

Driver Location:
Rear

Combination Lock Handing:
VD

Drop-In Location:
72

Forbidden Zone:
0 - 20

Combination Lock Opening Procedures:
4xL to first number.
3xR to second number.
2xL to third number.
1xR until dial stops.

Combination Lock Drill Point:
7/8" from dial center at 72. Align wheel gates at lever fence.

Combination Lock Relock Trigger Type: Wire spring.
Activated when combination lock cover is removed or punched.

Combination Lock Relock Trigger Drill Point: 7/8" right of dial center and 1-5/8" down. Grab the relock trigger arm with a hook wire and pull towards you to release.

Combination Lock Changing Procedures:

1. Dial the existing combination to the changing index.
2. Insert the proper change key and turn it left 1/4 turn.
3. Dial the new combination to changing index.
4. Turn the change key right 1/4 turn and remove it.
5. Test the new combination at the opening index.

External Relock Device Type: None

Special Notes:

There is a 7/16" piece of hardplate, which is free floating in a cavity welded on back of the door which doubles as the lock mounting plate.

TNL

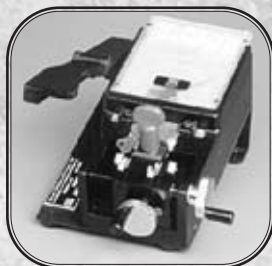
TECHNITTIPS

YEAR-END PRIZES



Grand Prize

Silca Bravo Duplicator



1st Prize

*HPC's 1200PCH
Punch Machine*



2nd Prize

*Mas Hamilton's
PowerLever 2000*



3rd Prize

Curtis 2200 Duplicator



4th Prize

*SDC Magnetic Lock,
Keypad and Exit Switch*



5th Prize

*Securiton 12-Volt Unlatch Plug in
Trans & Touchpad Retail Value \$650*



6th Prize

LaGard "SmartGard"



7th Prize

Detex Advantex



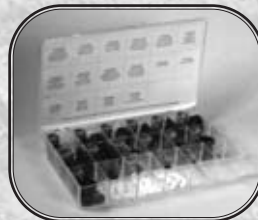
8th Prize

*Arrow 400 Series Alarmed
Exit Device & S-75 Mounting
Plate Kit for Narrow Stile
Aluminum Doors*



9th Prize

\$500 in BWD Products



10th Prize

\$500 in ASP Auto Locks



11th Prize

\$500 in Strattec Auto Products



12th Prize

Tech-Train "Jiffy Jack"



13th Prize

*Sargent & Greenleaf 6120
Electronic Safe Lock*



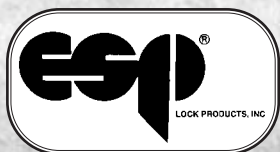
14th Prize

*High Tech Tools
2000 Pro Set*



15th Prize

Slide Lock's Master "Z" Tool Set



16th Prize

ESP Products Sampler



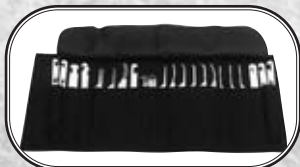
17th Prize

Major Manufacturing's
HIT-111 Drill Guide



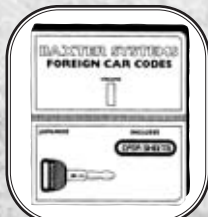
18th Prize

Abus Padlock's Marine
Padlock Display (\$120 Retail)



19th Prize

MBA USA, Inc.
Falle Pick Set



20th Prize

Baxter JV-1 & JV-5
Code Books



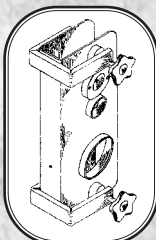
21st Prize

Sieveking Products
Squeeze Play



22nd Prize

Rodann's RV500 Wireless
Door Annunciator System



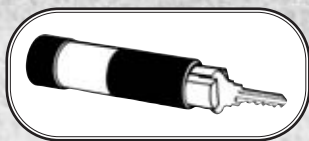
23rd Prize

A-1 Security Manufacturing
Installation Jig



24th Prize

Keedex Sampler



25th Prize

Framon
Impressioning
Handle



26th Prize

Gator Tool Multi-Purpose
Facecap Tool

These Prizes Awarded Each Month!

- BWD Automotive Ford or GM KwikIt
- Wedgeco™ Key Extractor Kit
- Strattec Racing Jacket
- HPC Air Wedge™
- Sargent And Greenleaf 4400 Series Safe Deposit Box Lock
- A-1 Security Products
- ILCO Key Blanks (100 Blanks)
- Keedex "SPIN OUT" Screwdriver
- Tech Train Training Video
- Sieveking Products Gm E-Z Wheel Puller
- Major Manufacturing Products
- Slide Lock's "Z" Tool Opening Set
- The Sieveking Auto Key Guide
- Jet Key Blanks (100 Blanks)
- High Tech Tools
- LaGard Combo Guard

Send in your tips, and win!

How To Enter

Send a tip on how to do any aspect of locksmithing. Certainly, you have a favorite way of doing something that you would like to share with other locksmiths. Write your tip down and send it to:

Jake Jakubowski, Technitips Editor,
The National Locksmith
1533 Burgundy Parkway
Streamwood, IL 60107-1861

Or send your tips via
E-mail to: Natllock@aol.com

Rules & Regulations

Each tip submitted must include your full name, street address (no P.O. Box numbers), city, state, zip code, phone number, fax number or e-mail address.

Every Tip Published Wins

If your tip is published you will win one of the monthly prizes listed. At the end of the year, we choose winners from all the monthly tips published, that will be awarded one of the fabulous year end prizes. All you have to do to win is enter.

Prizes are arranged according to suggested retail price value.

Tips Start
on Next Page





**BWD KWIKIT WINNER:
Home-grown VATS
Interrogator Key**

Frustrated at having to buy the Strattec® plastic key adapters for VATS (five at a time) just to determine the correct resistor value, I decided to see if I could come up with something that would work just as well.

I used a GM key cover cap. I pulled the adapter wires from a used Strattec® key, then used my soldering iron and - holding the wires in place - heated the wire with an ironing motion and melted the wires into the plastic GM cover cap.



Photograph 1.

I now simply slip the cover cap with the prongs over a cheaper, but correctly coded, mechanical key. (See *photograph 1*.) From that point I simply hook up my vats interrogator and viola, I'm on my way to determine the correct resistance value.

While checking to see if I had a good contact or not, I noticed two things that would help me determine if I had a good contact with the system.

If the security light was flashing, I did not have a good contact. In that case, I had to adjust the wire prongs until the light was steady.

Sometimes the security light would not turn off until after the vehicle started, so I learned not to let that fool me into not turning the ignition to the start position.

So far I have used this technique successfully on three different vehicles.

*Robby & Jackie Stout
Texas*



**WEDGECO KEY
EXTRACTOR WINNER:
Roll Pin Removal Tip**

This is an alternative method for removing those old pesky roll pins to remove foreign ignitions and other locks of the sort. (Namely Nissan ignition locks.) I find it easier than the old drill a hole next to the pin and pry method.

I use a hacksaw, or Dremel®, to

A Few Words From Jake...



**by Jake
Jakubowski**

It's been awhile since I published one of my tips, so I thought I would do just that this month.

This tip has to do with the one word that many locksmiths don't want to hear, because they are convinced that among the many hats that they wear, a salesman's hat is not one of them. Hate to disillusion y'all, but...

There's an old adage in the selling game that says: "Nothing happens until somebody sells something!"

That's so trite that it becomes a truism. Whether you realize it or not, when you convinced your mate to make a commitment to you - you sold them on the idea that life with you would be a pretty good deal. When you convinced the banker to loan you the money to expand your business, you sold him, or her, on the idea that you were a good credit risk. When you convinced your new customer that they would benefit from doing business with you, you sold them on the idea that you had more to offer than your competitors. And when you convinced a customer that they needed a new deadbolt rather than rekey the old one - you convinced them they needed better security.

As a locksmith, you are, or should be, "convincing" people to buy your product or services. Sometimes you do it passively (as in "Word of Mouth" where one customer tells a future customer what a great locksmith you are). Often you have to do it proactively by "hitting the streets" and "knocking on doors" and letting prospective clients know who you are and what you do. Interestingly enough, the more "proactive" and aggressive your "sales campaign" is... the more business you'll do.

This is not a primer on selling. It's just a tip to get you to realize that we are all salespeople. From the time we're born until we make our final deal with the Devil - we have been selling ourselves, and our ideas, to others. So, why not make some money doing the same thing with your business? After all "convincing" is just another word for selling.

My tip this month is:

They who whisper down a well;
About the goods they have to sell.
Will never reap them golden dollars;
Like them that stands and shouts and hollers!
See y'all next month

cut a slit on the housing directly next to the roll pin on the easiest side to access. Saw approximately 1/16 of an inch straight down. Now angle your cutting device at a 45° angle toward the pin. Continue cutting until you have cut just slightly into the roll pin. Insert a pocket sized flathead screwdriver into the slit and begin to pry up on the pin. The screwdriver will wedge in the slot cut in the pin allowing you to extract the pin easier.

Once the roll pin is far enough above the surface on the housing, use a pair of diagonal cutters to grip and remove the pin.

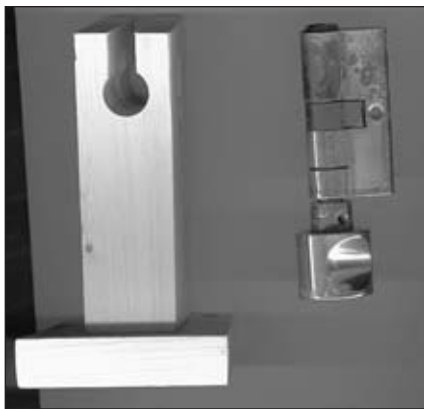
*Daryl Paternostro
Louisiana*



**STRATTEC WINNER:
CES Pinning Jig**

Here on the Gulf Coast of Florida, we have lots German-made CES profile cylinders. Recently, I had to rekey 13 of these cylinders for a large home. I had trouble holding the cylinder in one hand and checking the key with the other. It is necessary to check the operation of the key after you combine each chamber because the depths do not match with Schlage one hundred percent.

In *photograph 2*, you can see how I drilled a hole in the edge of the block and then "opened" the hole up on a band saw to give me the profile shape that I needed.



Photograph 2.



Photograph 3.

In *photograph 3*, I drilled two holes to allow the “tailpiece” — which is actually in the middle of this lock to move freely.

With the cylinder in the jig I can pin a chamber, check the operation of the key and go on to the next chamber.

I even drilled two holes in the base of the jig so I could, if necessary, attach the jig to the workbench of my truck.

Ben Marshall
Florida



HPC WINNER:
**Picking Everest
Cylinders**

Illustration A, shows how I was able to modify an Everest Key blank in such a manner that I am able to pick an Everest cylinder about as easily as I can pick a standard Schlage cylinder.

Simply grind away the blank as shown in the illustration, leaving just a little of the bottom shoulder stop to permit proper alignment of the tool in the keyway.

The modified blank lifts the finger pin to the shear line, which leaves you only the “regular” pins to pick.

I’ve also found that this trick will

work with Primus as long as you have the “proper” blank for the keyway you are working on. That is, the blank has the same finger pin combination as the cylinder.

Also, I have found that generally,

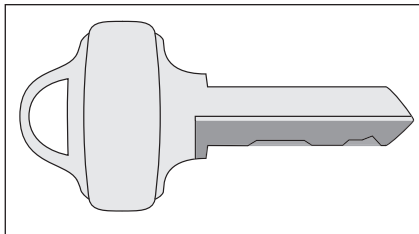


Illustration A.

locks pick easier if I use my tension tool at the top of the keyway instead of the bottom, as long as my tool does not bind the first pin. I have shortened the leg on most of my tension wrenches to keep this from happening.

Brian Jensen
Oregon



SARGENT &
GREENLEAF WINNER:
**Harley Lock
Removal**

Here is a tip that should save some frustration in removing the lock cylinder assembly from the fork

Sieveking Auto Key Guide



The Sieveking Auto Key Guide lists over 2,600 automotive and motorcycle keyways, covering makes from Acura to Zundapp, and listing fourteen popular key manufacturer numbers.

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#AK - 1

assembly of late model Harley Davidsons. The full dress tour bike uses a self-contained ignition fork lock that is activated by an Ace type key.

To remove the locking unit that contains the Ace cylinder, there is a small tab/plunger-type detent on the backside of the chrome lock assembly. (See illustration B.) This hidden plunger is concealed at the lower left-hand side, underneath the large pot metal locking unit.

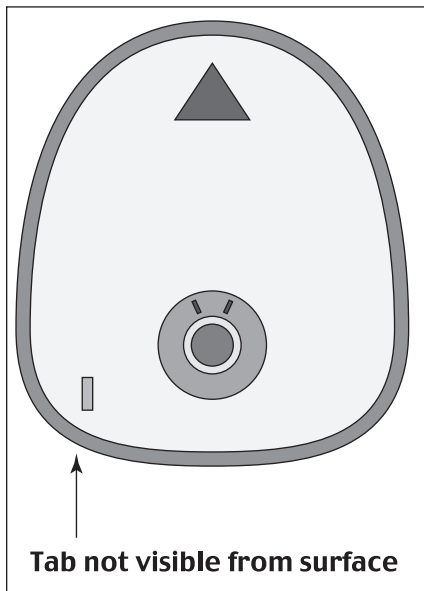


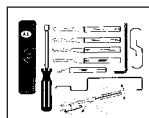
Illustration B.

With a small screwdriver or flat object, push upward on the tab, toward the face of the lock as the key, or picked cylinder, is turned counter-clockwise past the locked position. This detent is what limits the travel of the key assembly. The entire assembly is then rotated to the accessory position where it will pull out of the plastic body.

The Ace cylinder is held in place by an Allen screw and an adhesive of some kind (probably silicone). The entire assembly is concealed under a thin metal faceplate that is also stabilized by a silicone-like material. The faceplate can be carefully pried off and then reattached when the job is complete.

When working on these Ace cylinders, whether fork, console, or saddlebag locks, I have found it necessary to replace the inner parts with Chicago Ace lock parts. The inner cores are either made of plastic or a very mild metal material that doesn't hold up very well.

J. Paul McFadden
Texas



A-1 SECURITY
PRODUCTS WINNER:
Jeep Ignition Fix

The construction of the

Chrysler/Jeep ignition module that holds the ignition key switch, allows for simple removal of the key cylinder when broken wafers do not allow the switch to turn with the key.

After removing the ignition module from the column, remove the three T-3 Torx screws that hold the black cover in place. (See illustration C.) After removing the roll pin, pushing in or grinding off the retainer, you will

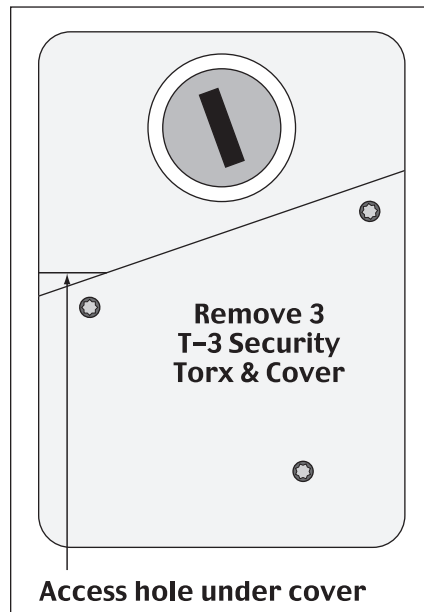


Illustration C.

Dave McOmie's Safe Book Collection

Dave McOmie Safe Book Collection on CD

This CD contains
every book Dave
has ever published.

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#DMCD - 1

find a hole under the black cover at about the 7 o'clock position. At that point, an awl or other sturdy instrument can be inserted and pushed upward, causing the entire cylinder to turn allowing its removal.

*Dave Craig
Illinois*



ILCO KEY BLANKS
WINNER:

HPC Super Snare Tip

I had some problems with HPC's Super Snare.

Either the wire would come off the end of the snare or the wire would slip off the locking button. I simply found it difficult to get a tight grip on the locking button.

I decided to take the wire out and replace it with .065" plastic wire used for weed trimmers. Now, my Super Snare works great.

*Dave Nissen
Minnesota*



KEEDEKX WINNER:
Suction Cup Tool Tray

I have been looking for a practical, small tool tray that I can attach to the doors that I am working on to hold my picks and other small tools.

Not finding anything commercially that I was satisfied with, I started looking around the house to see what I could find.

I found an old nut grater with a suction cup on it. I cut the grater off, leaving the suction cup and leg of the grater. Going through my wife's gardening stuff, I found a small flower box that was just the size that I wanted for my tray.

I screwed the suction cup and tray together by means of a small flat angle steel support. I put a setscrew in it to hold the tray's swivel adapter so the tray could be rotated 360°. (See photograph 4.) With a slight push or



Photograph 4.

pull on the suction cup activator and the tray can be securely attached or easily removed from any door I am working on. Best of all, I can use this little tool tray without worrying about it scarring the door or paint and it keeps all of my small tools where I can simply reach for them without having to start all over.

*John Trewolbeck
Canada*

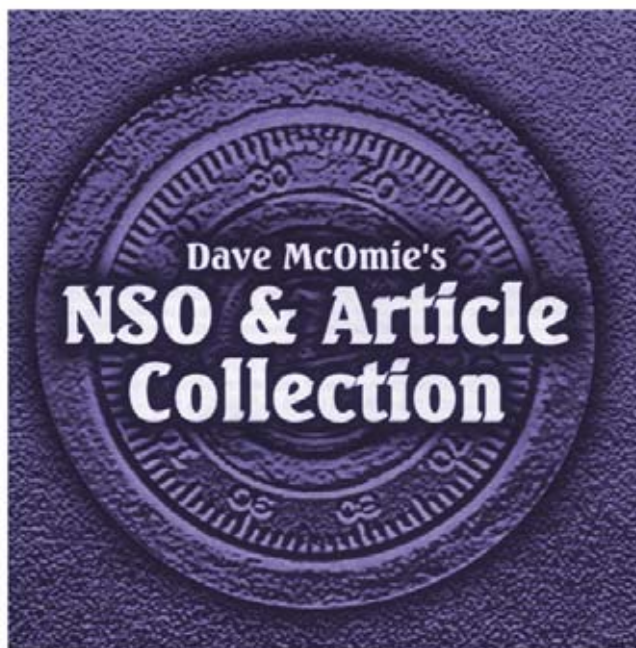


TECH TRAIN TRAINING
VIDEO WINNER:
No Key Locking Tip

A store manager had left expecting his assistant to lock up at closing, but had taken the key with him. I was called to lock the store and figured I'd just pick the lock, collect my money and get back home. Wrong!

The lock was an Adams Rite deadlock with a Medeco cylinder and cylinder spin guard on it.

What I did was release the bolt (using the thumb turn) and with the bolt partially extended, I put duct tape on the side to hold it extended. I closed the door enough for the bolt to clear the frame and align with the strike and pulled up until the duct tape came off. I then used my knife to work



Dave McOmie NSO & Article Collection on CD

This CD contains every NSO newsletter and McOmie File Dave has ever published.

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#DMCD - 2

the bolt up into the locked position!

That way, the morning crew simply unlocked the door as usual.

*Kirk Lebert
Canada*



**SIEVEKING
PRODUCTS GM E-Z
WHEEL PULLER
WINNER:**

**Quick Re-Install of
Ford 8-Cut Ignition**

After servicing a Ford 8-cut ignition, this tip will make the installation of the spring-loaded ball bearing a one-handed job, or at the most, an extremely easy two-handed one.

What is needed is a #2 nail set or counter sink, also known as a 2/32, and an inexpensive tool magnetizer/de-magnetizer. The magnetizer, available at Home Depot, is manufactured by General Tool which is a very useful tool to have if you do not already own one.

To use these common tools to make you next Ford 8-cut easier, magnetize the business end of the nail set. The magnetizing of the concave end of the nail set will allow the ball bearing to be held "captive" on the end of the nail set.

Next, drop the spring into its location under the active cylinder retainer. Now, use the nail set to push the ball bearing down onto the spring and hold it in the plug as you rotate the plug counter-clockwise. As you rotate the plug, gently allow the nail set to be pushed out of the way as the ball bearing slides into position and is completely seated.

*Gary Liebman, CRL
Maryland*



MAJOR

**MANUFACTURING PRODUCTS
WINNER:**

Tubular Key Cutting Trick

The other day I was at a church fall festival. They were raising money for a building, so I donated my time and keys.

One of the attendees asked me if I could cut a tubular key. I said sure, but when I tried to slide it on the shaft of my tubular key machine, it wouldn't go on. After closer examination of the key, the tubular wall was much thicker than a regular 1137 blank. The thicker wall prevented the key from sliding on the shaft of my tubular key

machine. The customer happened to have the hitch lock with him. It was called Gorilla Guard and made in Korea

I picked up an 1137 and tried to insert it in the keyway. It went in with no problem. I decoded the customer's key and then used some depth keys to originate a working key for the Gorilla Guard.



*Marc Grizzard
South Carolina*

**SLIDELOCK "Z" TOOL
OPENING SET WINNER:
Hyundai Ignition Fix**

I had an ignition lock that had

previously been changed and did not match the door key as it should have. I had to generate a key for the ignition and could not pick the cylinder to the "O" position to remove it from the column.

I told the owner I would have to drill (and replace) the ignition. However, when I took the facecap off, I discovered that there was enough room to drill a hole into the plug and under the retainer. This allowed me to depress the retainer and remove the cylinder.

If you try this, I would recommend that you use either a 9/64" or a 5/32"

15 Minute Safe Opening



This book deals exclusively with round head lift out doors. Shows five ways to open a Major; three ways to find the Dog Pin on a Major; four ways to open a Star; four ways to open a LaGard style round head.

CLICK HERE TO LEARN MORE



bit and nothing larger. Only drill deep enough to clear the retainer.

After removing the lock, remove the snap-ring and push the plug out through the front of the cylinder. If you find numbers on the wafers, the numbers will be in reverse order. That is, 1 = 4, 2 = 3, 3 = 2 and 4 = 1. After decoding the wafers, originate a key and reassemble the cylinder, lock and replace the facecap.

*Bert Watson
Colorado*



**THE SIEVEKING AUTO
KEY GUIDE WINNER:
Saab Trunk Opening**

Here's a quick tip for opening a Saab 900 trunk when the car is locked.

First remove the left license plate light. With a fondue fork, angle it to the bottom of the lock cylinder and push down, this will open the trunk.

My experience has been that this will work on all Saab 900's.

*Jonathan Muhammad
Georgia*



**JET KEY BLANKS
WINNER:
Opening Storefront
with High Tech Tool**

Running out of time, I had to find a way around the stubborn LSDA mortise cylinder that refused to pick. The door was an aluminum storefront door with an Adams Rite deadlatch on it with a thumb-turn on the inside.

I went to my van and got out my High Tech #2 Hooked Tool. I inserted it between the door and the frame and was able to manipulate the thumb-turn to unlock the door.

I want to tell you that I think there is no end to the capabilities of this tool, I have even used it to "fish" keys out of a locked trunk!



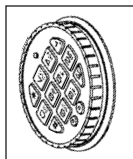
*Rila Carroll
Louisiana*

**HIGH TECH TOOLS WINNER:
Easier Under-The-Window
Openings**

Buy a can of Teflon touch-up paint from your favorite hardware store. Use steel wool to clean and roughen the surfaces of all your under the window tools and then coat them with two coats of Teflon Touch-up Paint.

The Teflon allows the tools to slide between tight widow and weather-stripping situations and will not scratch widow tinting like an untreated tool will.

Jerry Epperson



**LAGARD WINNER:
Safe Repair Idea**

Most lock distributors carry push plates for doors. These plates (4" x 16" or 3-1/2" x 15") come in different finishes and make excellent repair plates for safes. (See illustration D.)

If a safe has been drilled (and the holes repaired) or banged up, push plates can be used to cover up the

Florida

damage and give a "solid" appearance.

Simply use a hole saw to cut the proper sized holes for the spindle and handle and attach the plates to the safe with double-faced tape, adhesive or screws. You can turn a push plate into an attractive escutcheon very easily.

You can also make smaller sizes with the aid of a saber saw.

*J. F. Nowacki
Michigan*

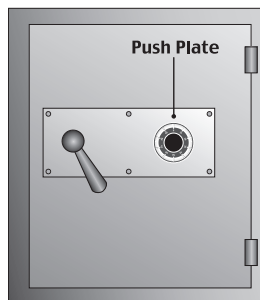


Illustration D.

IRL

NLAA One Year Membership



**Free when
you join NLAA**

The big problem in automotive locksmithing is the tremendous amount of information you need to have at your fingertips.

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1. Buell is affiliated with Harley-Davidson. This 500cc thumper uses one-half of a Harley V-twin engine. There are no codes anywhere on the motorcycle.

by
John
Blankenship

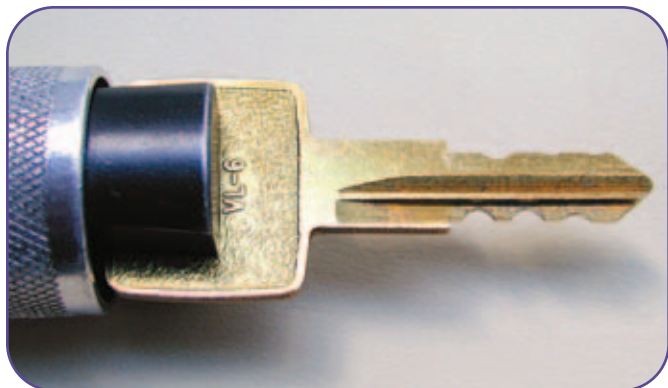


2. The ignition/ steering lock is the only lock on the motorcycle. It is located between the handlebars and speedometer and is slightly left of center.



3. Buell motorcycles are manufactured in the USA, but an Italian ignition lock is used on this model; it is a Zadi Q933. The lock is shown in the OFF position, which means the ignition is off but the steering is not locked. To lock the steering, turn the handlebars to the right or left, push the plug in and turn it 90 degrees counterclockwise to the LOCK position. Turning it a little farther to the 'P' position turns on the lights so the bike can be seen if it is necessary to park next to the road at night. It is not necessary to push the plug in when turning from LOCK to OFF.

Continued from page 108



4. You can avoid disassembling the lock if you can read and/or impression a key to it. It is awkward to get an otoscope into the correct positions to read all the wafers, but you can see some, if not all of them. There are six wafers with the odd spaces being on the bottom of the keyway and the even spaces on top. I was able to impression a key that decoded to 323121, which is code 8948. Although the correct blank is a Silca ZD23RCP, I used a modified Curtis VL-6 (Ilco X80) because they are brass and I have more of them than I do the Silca blanks. I duplicated the ZD23RCP blank onto the VL-6 blank to make it narrower and shorter. Be sure to rest the land on the top of the jaws when you clamp the blanks into your duplicating machine. If you don't have the Silca blank you can trim the width of an X80 to .310 and trim the length to .920 from shoulder to tip.



5. If you need to remove and disassemble the lock, it helps if the lock is in the OFF position so you can turn the steering. I was able to pick the lock from LOCK to OFF by raking the tumblers on both sides of the keyway. It is not necessary to push the plug in when turning from LOCK to OFF. Then use a 3/16" hex key to remove the headlight mounting bolts located on both sides of the headlight.



IC Cores: Small Format

Everything you ever need to know about how to sell, service, install and troubleshoot interchangeable cores!

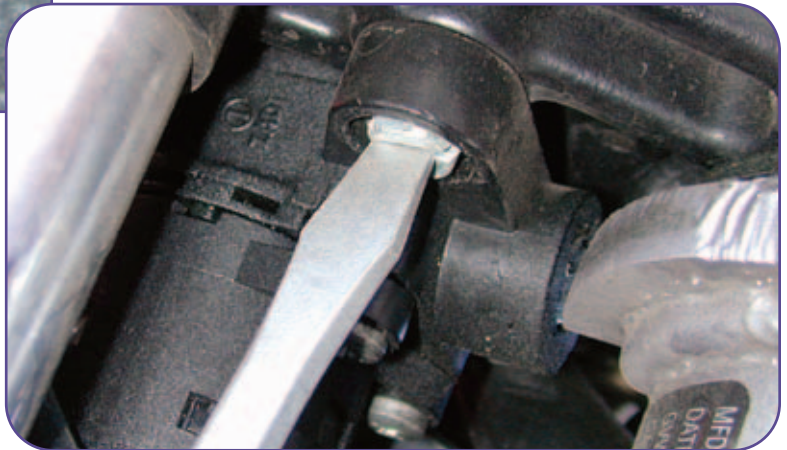
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6. Allow the headlight to rest on the front fender as shown. You now have access to the back of the ignition lock.



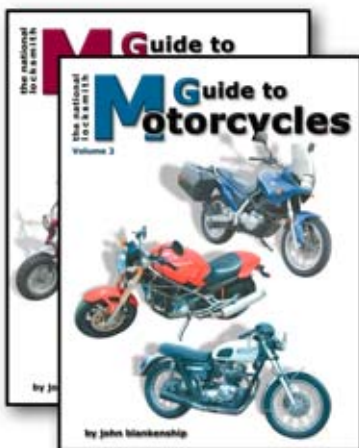
8. The other ignition lock mounting bolt can be accessed from the left side of the motorcycle. I did not have a thin wall socket so it was necessary to use a screwdriver. I was able to turn the bolts by hand although it was hard due to a thread-locking compound.



7. You can see one of the ignition lock mounting bolts that has a slot for a screwdriver as well as a hex head to accommodate a 3/8" socket.



Guide to Motorcycles Vol. 1 & 2



For years locksmiths have begged for a comprehensive service manual on motorcycles and its finally here!

[CLICK HERE TO LEARN MORE](#)

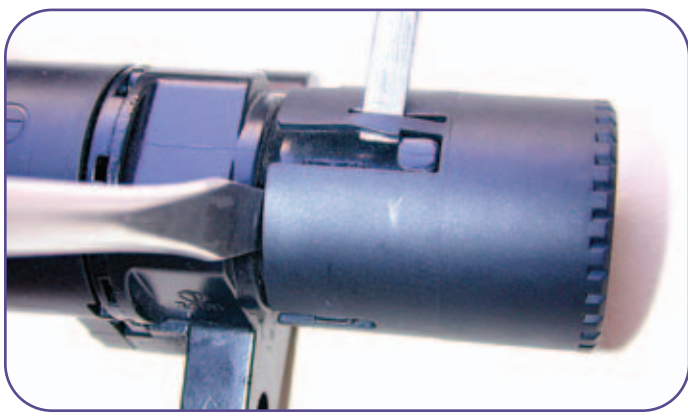




9. Once I unscrewed the bolts far enough, I was able to use a 3/8" socket to finish removing them.



10. Once the mounting bolts are removed, you can pull the ignition lock down and out. Then push the locking lever down on the female part of the ignition lock electrical plug and pull it apart. Now you can take the lock to a bench.



11. Remove the facecap/sleeve from the ignition lock. Use two small screwdrivers to pry up the locking tabs on both sides of the sleeve and then twist a large screwdriver between the back of the sleeve and the housing to push the sleeve forward and off of the cylinder. The photograph just shows one of the small screwdrivers prying up on the locking tab, but you need to pry up on both sides at the same time. It helps to hold the lock in a vice while you do this.

NLAA One Year Membership

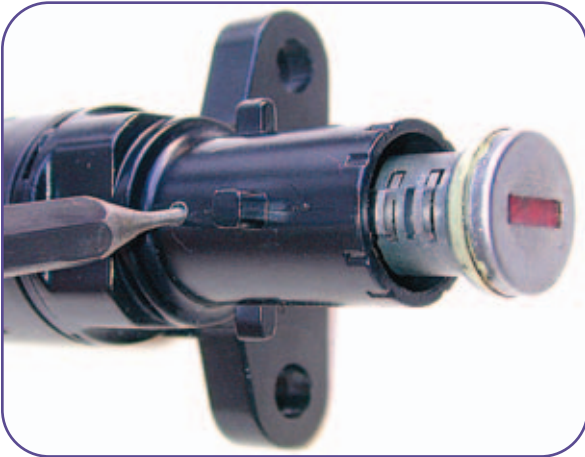


The big problem in automotive locksmithing is the tremendous amount of information you need to have at your fingertips.

**Free when
you join NLAA**

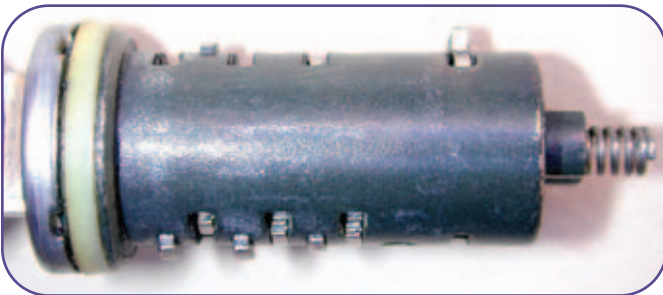
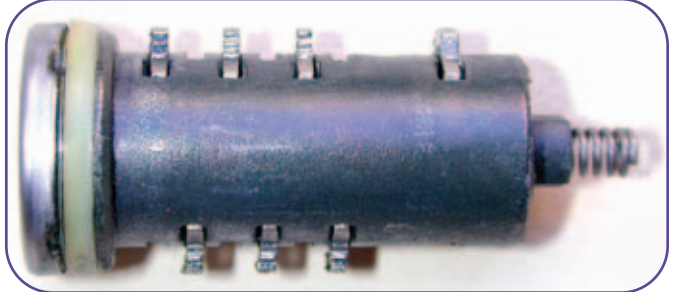
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12. With the lock in the OFF position, drill a small poke hole 1.25 inches (31.75mm) from the face of the plug in line with the keyway and on the opposite side from the steering lock bolt. Be ready to stop drilling immediately when the drill breaks through to avoid damage to the retaining wafer. Use a punch or similar tool to depress the retainer and the spring on the back of the plug will push out slightly. Grab it and finish pulling it out. You do not need to worry about the tumblers falling out. The lock needs to be in the OFF position to remove the plug due to lateral locking grooves in the cylinder that will trap the tumblers and retainer when in the LOCKED position. I was able to pick this lock from LOCK to OFF by raking the tumblers on both sides of the keyway.

13. The plug contains six wafer tumblers staggered on both sides of the keyway and the wafer retainer that cannot be touched by a pick in the keyway. The spring in the back of the plug stays in place pretty well but be careful not to lose it.



14. A blank inserted into the plug shows the cuts are 323121.



How To Pick Tubular Locks

This software shows you every step of tubular lock picking in clear and simple detail.

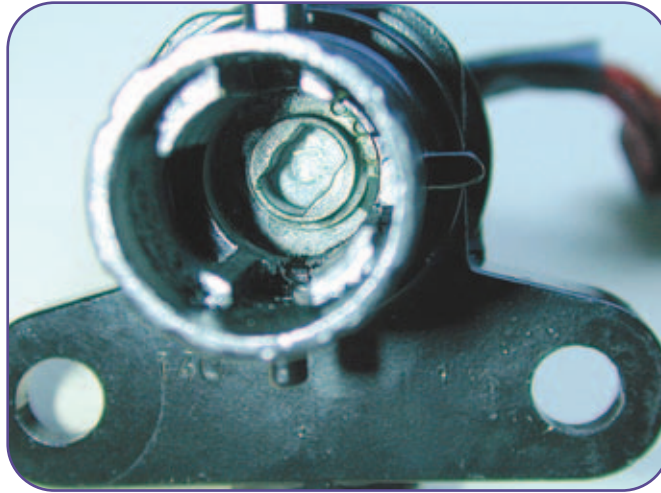


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15. A code cut Silca ZD23RCP with cuts of 323121 turns the lock smoothly. The plastic bow hit the jaws of my ITL before the shoulder contacted the stop, so I used a Dremel to remove a tiny bit of the plastic. The original Buell key is on the right.



16. This frontal view of the cylinder shows the locking slot in the top center. If you insert the plug with the retainer aligned with this slot the retainer will hit the back of the slot and stop. Use a screwdriver to

turn the tailpiece 45 degrees counter-clockwise as shown and then align the retainer with the land just to the left of the top locking slot. With the key inserted, depress the retainer and push the plug all the way in.

The lock is available from Harley/Buell dealers:

Part No.: Y0725.T Price: \$43.95

Note #1: The owner can order a key by the VIN or code number through the dealer.

Note #2: The #1 depth measurement given in the codes will work, but it is a little too shallow so it is best to leave it uncut.

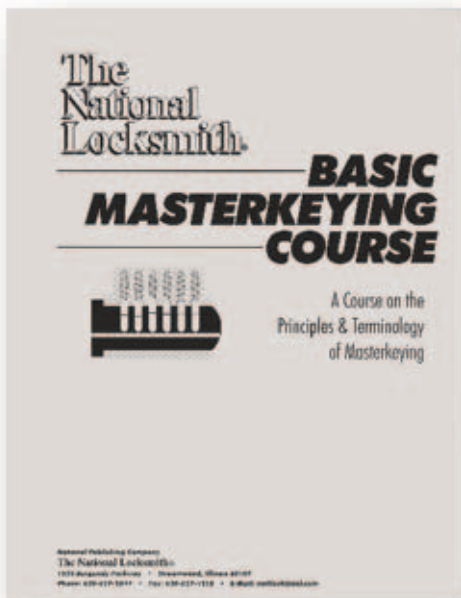
Codes: 8001-9554

Blank: Silca ZD23RCP or ZD24RDP

Spacing: 1 = .146, 2 = .256, 3 = .366,
4 = .476, 5 = .587, 6 = .697

Depths: 1 = .301, 2 = .276, 3 = .250, 4 = .224

TNL



Basic Masterkeying Course

13 Lesson
450 page course

The Basic Masterkeying course is designed for the locksmith who wishes to become proficient in Basic Masterkeying.

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#MK - 1

BASIC ELECTRONICS

part 4



by
William C. Deutsch

Now that you own a meter and have spent the last month getting acquainted with it, (you did, didn't you?) let's start working.

All of the examples in this article will use the same basic EAC circuit that I introduced in the first installment. Here it is again, just to refresh your memory. It consists of a power source, a switch, and an electric strike. I have numbered some test points, and will be referring to them throughout this article. (See illustration 1.)

Measuring Voltage

The most common use for your meter will probably be to measure DC voltage. Suppose you were on a service call where the only complaint was, "The electric strike will not open." Your first step would be to meter the voltage at the strike.

When measuring voltage, you always connect your meter in parallel with the power source. In this case, that means the positive probe touches the positive side of the strike, and the negative probe touches the negative side. Look at test points 3 and 4 on the

2. Set the range. Since I know that this is a 12-volt strike, I will set my meter to 20V range. This means that I can safely measure any voltage up to 20 volts. If you own an auto ranging meter, you can skip this step.

3. Touch the positive meter lead to the positive side of the strike, and the COM to the negative side.

4. Press the switch and send power to the strike.

If your voltage is within 10% of 12 volts, the strike is receiving plenty of voltage. If it were not working in this condition then it needs to be adjusted or replaced.

Measuring Resistance

What if you did not meter any voltage at the strike? The problem could be a bad switch, but with a meter handy, you don't have to guess.

Let's take a closer look. This time, instead of voltage, we are measuring resistance. Resistance is opposition to current flow. An open switch should produce infinite resistance since - ideally - no current flows through an open switch. A closed switch will

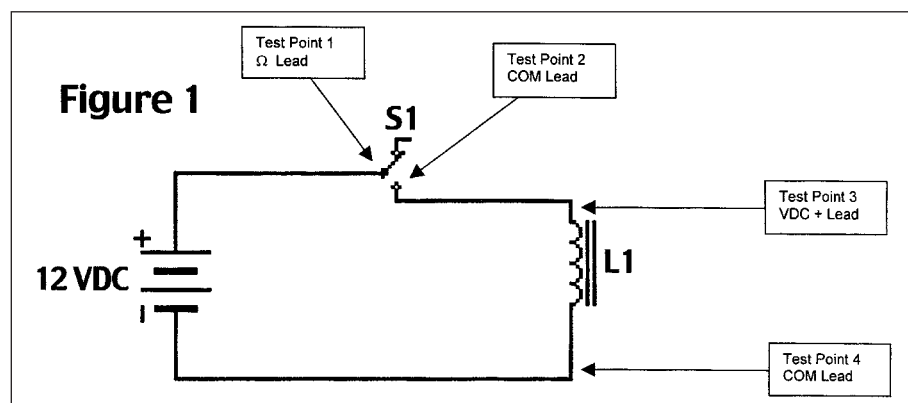


Illustration 1.

schematic. If your electric strike has screw-down terminals, then test point 3 is the terminal to which the positive side of the voltage supply is connected. Point 4 is the negative. If the strike is soldered or "wire-nutted" to the power supply, then you will remove the wire nuts or tape that cover the splices and touch your meter to these points.

Here is the procedure you would follow for measuring DC voltage in a circuit like the one in our schematic:

1. Connect the leads to your meter. The black lead always goes to the terminal marked COM. Since we are measuring voltage, the red lead will go to the terminal marked V.

present little or no resistance to current flow.

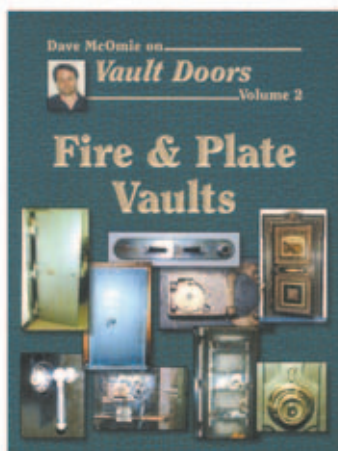
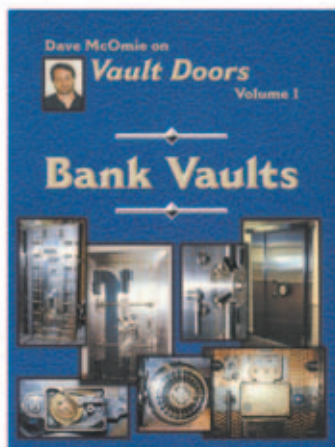
When you measure resistance, you are actually creating a small circuit of your own. Your meter supplies the power source and wires, and the switch becomes the load. Here's how it works.

1. Connect the leads. Black to COM, red to V.

2. Set your meter to its lowest resistance setting (if it is not auto ranging) and look at the display. This is the same reading you will see if your switch is open. There is no standard reading for an open circuit, so just get used to looking for the one

Continued on page 122

Dave McOmie on Vault Doors Vol. 1 & 2



These openings can be a nightmare, but not when you bring Dave McOmie along with you on the job.

[CLICK HERE TO LEARN MORE](#)



Continued from page 118
that your manufacturer uses.

3. Now touch your meter leads together. You should see a reading between 00.0 and 00.3. This represents a closed circuit. The junction created by touching your two leads together presents between 0 and .3 ohms of resistance in the circuit.

4. Take the switch out of the circuit by disconnecting one wire. You do not want any of the other components affecting your reading.

5. Touch the meter leads to each terminal of the switch. (Test points 1 & 2.). Polarity is not important here.

6. A small current will now flow from one terminal of your meter, through the switch (if it is closed) and back into the meter.

7. The meter will compare the voltage it sent out to the voltage that returns and calculate the switch resistance. (Don't worry if that goes over your head right now. It will make sense later when we discuss some electronics formulas.)

8. In a good switch, you will see about 00.3 ohms of resistance when closed. If the reading toggles between open and closed every time you

depress the switch, then the switch is working.

In summary, here are the steps to follow when using your meter:

1. Connect your leads. The black lead always goes to COM. The red lead connection will vary, depending on what you are going to measure.

2. Set the range. Remember, the range tells you the highest unit that you can safely measure (voltage, current, or resistance). If you are unsure of the range, select the highest and work your way down.

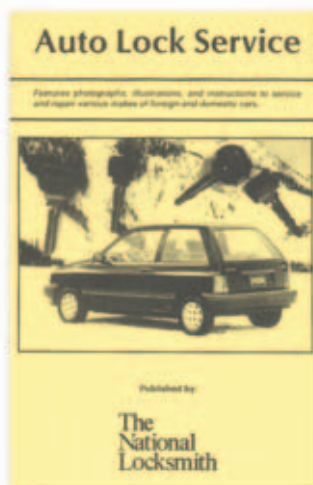
3. Connect your leads in parallel for voltage.

4. When testing resistance, always disconnect the switch, contact, etc. from the circuit by disconnecting one of its wires.

Now for your homework: Keep using that meter! Every time you hook up a strike, switch, etc., take a few extra minutes to take all of the appropriate measurements. Not only will it make you a wiz with the multimeter, but it will give you the confidence of knowing that your installation is working well.

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Auto Lock Service



Covers opening and service techniques.

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#ALS - 1

BUSINESS BRIEFS

Darex Corporation Updates Web Site

Darex Corporation announced the launch of a new and improved web site, www.darex.com. The new site was designed to be easy to navigate, with all contents of the site viewable from the navigation bar. It provides current customers with technical support, operation manuals and sharp extras regarding cutting tool technology. In addition,

three years as the U.S. Sales and Marketing Manager for Trimec Technologies US, an Australian electric strike manufacturer recently acquired by ASSA ABLOY.

Aiphone Appoints President/CEO

Aiphone Corporation has appointed Tak Kaniye as President/CEO. Kaniye is responsible for the overall operation and sales of Aiphone Corporation. His main objective is to continue to grow Aiphone Corporation by developing the products needed in the market.

Kaniye comes to Aiphone from their parent company, Aiphone Company, Ltd. in Nagoya, Japan. For the past five years he was the Export Department Manager. In this position he was in charge of the company's International Business development which included all Sales and Marketing activities.

New Dual-Option Yale Electrified Lockset

A new electrified cylindrical lockset, Yale model number 5400LN, for use where both security and life safety are desired, is now available from Ace Lock & Security Supply. Built to withstand abuse and vandalism for long-lasting security, the new lockset features remote locking and unlocking using a self contained, integral, continuous-duty solenoid. Available with a fail-safe or fail-secure option, this new lockset offers a patented freewheeling lever mechanism with a mechanical cylinder override which functions whether power is on or off. This new lockset operates either in 12 or 24 volts DC, with an external rectifier included for AC operation. Easily installed in standard cylinder openings, the new Yale

lockset is UL listed, and meets the requirements of ANSI Grade 1.

Dortronics Appoints New Sales Reps

Dortronics Systems, Inc. appointed Focus Sales as the company's sales representative covering the Southeastern U.S.; specifically the states of Florida, Alabama, Mississippi, Georgia, and Tennessee. Focus Sales presently operates offices in Lithonia, Georgia and Melbourne, Florida, and plans to open an additional office in Nashville, Tennessee.

Security Safe's Website Enhancements

Thanks to the huge growth in the popularity of the world wide web over the past years, Security Safe has now obtained an online presence and is happy to announce the completion of several months of enhancements to its nearly three year old existing website. Visitors to the web site can now purchase safes such as the American Security Teton Series 6022 gun safe via secure online ordering, thanks to the new addition of the safe showcase catalog. Site visitors may also locate bargains on jewelry at set price ranges, get the latest burglary statistics for the state of California, go directly to the product lines of popular gun manufacturers, and receive random gun safety tips.

Contact: Security Safe, 1753 Addison Way, Hayward, CA 94544. Phone: (510) 732-8710; Fax: (510) 732-8716; E-Mail: safes4sale@yahoo.com; Web: www.securitysafeusa.com

NEBS Content Agreement with inc.com

Leading small business resource NEBS (NYSE:NEB), has entered into a content

sharing agreement with inc.com (www.inc.com), the Internet destination of the Inc. brand devoted to delivering comprehensive management resources and tools to small businesses. The potent combination of these two premier small business resource sites, brings the selection of vital business-building and management information within the burgeoning small businesses sector to the next level.

For more information, please contact: Patti Kane; Phone: (781) 444-5543 ext. 887; E-mail: pkane@gumpertcom.com.

DORMA ED800 Low-Energy Operator

New literature from DORMA provides application notes, specifications and technical information for the ED-800 low energy operator. The ED800 combines a powered door closer with microprocessor control to render an ADA-compliant device that either assists with the opening of a door or opens a door automatically for the physically challenged. As a safety measure, it only uses power to open the door, relying on a conventional closer to shut it. Its stand-alone, streamlined design makes it easy to install. Utilizing the latest microprocessor technology, the ED800 periodically updates itself to adjust to changing door conditions caused by wind, weather or other factors.

Strattec Lock Service Package Usable for Ford Focus Ignition

Strattec's Ford Explorer Lock Service Package (706229) can be used to service the Ford Focus ignition. While Strattec is not the original equipment supplier for the Focus, their lock fits the application, and provides easy serviceability.

TNL




potential customers will find product information, links to industry articles and sites, a worldwide database of stocking distributors, as well as general company information. Darex continues to have substantial web traffic and feels a strong web presence is necessary for both domestic and global markets.

HES National Sales Managers

HES has added two national sales managers responsible for contract hardware and wholesale distribution sector sales. Laurie Webb named National Sales Manager, Contract Hardware Division after joining HES in 1997, Laurie served as Business Development Manager for more than two years and most recently as the company's National Key Accounts Manager for the Security Alarm Division.

Rick Steger named National Sales Manager, Wholesale Distribution Prior to joining HES in December 2000, Rick Steger served for

THRU THE KEYHOLE



A Peek at Movers & Shakers in the Industry

ATTENTION MANUFACTURERS AND DISTRIBUTORS:

Would you like your company and products to be profiled in *Thru The Keyhole*? Please call Editor, Greg Mango, at (630) 837-2044.

Ultra Hardware Opens New Facility in Pennsauken

Ultra Hardware Products, L.L.C. of Pennsauken, NJ, recently opened the doors to its new one million cubic foot warehouse facility. This \$1.8 million expansion was needed to accommodate Ultra's rapid growth fueled in part by Ultra's acquisition of a primary competitor, its expansion into new product lines and an ever-broadening customer base. Ultra is part of Arch America Company, a \$400 million holding company, which also included Aluminum Shapes, L.L.C. (an aluminum extruder). AccuWeld, L.L.C. (a Vinyl window manufacturer), Secura-Seal (a steel door manufacturer) and the Delair Group, L.L.C. (a manufacturer of pools and fences).

Ultra's new warehouse utilizes a unique creative approach to space management. The new warehouse is 53 feet tall with 45 feet of shelving to stock merchandise ten pallets high (as opposed to the usual two or three). Ultra purchased specially designed lift trucks from the Raymond Corporation and installed super flat floors with permanently installed guides for the lift trucks to create an extremely efficient warehouse environment.

The new warehouse has provided Ultra with additional opportunities to add entirely new product categories, such as plumbing products, cabinet hardware and component parts for the Original Equipment Manufacturer (OEM) window and door industry. The new systems developed specifically for the larger warehouse will insure that Ultra's turn-around time and order to shipment, will only improve. Ultra developed an improved layout for the new facility and combined this with a complete

overhaul of methods used for shipping orders. They have also added a second shift to the operation. In this industry, 24-hour turn-around of an order is considered the measure of efficiency. With the new systems in place, Ultra can absolutely guarantee 24 hours or less from order time to shipping.

Ultra manufactures and distributes a wide range of residential and commercial door hardware, including locksets, padlocks, window hardware, door hardware, cabinet hardware, plumbing supplies and hand tools.

Ultra Hardware had sales of \$28 million in 1997; a gain of 20 percent over the previous year and in keeping with on-going annual sales increases of 15 to 20 percent since the company was founded in 1987.

Digital Satellite System (DSS) Enters Electronic Security Market

The Select Dealer Program is a specialized marketing program which targets medium-size security dealers who rely on contract monitoring. This program allows a dealer who builds business on reputation, quality service and customer relations to compete with the \$99.00 mass marketing concepts of companies such as ADT and Westinghouse. There is an estimated 15,000 qualified security dealers in the United States, their goal is to establish 300 to 500 Select Dealers in key markets throughout the country.

An ideal candidate for the Select Dealer Program would like to retain part of the recurring revenues, maintain ownership of the monitoring contracts, obtain the benefits of National account pricing, have the option of financing for

dealer's accounts, and gain access to quality leads generated for the dealer, while maintaining the company's identity.

The Program combines six (6) industry leaders who represent excellence in their respective fields. These six companies combine to form an alliance which benefits both the dealer as well as the partners. Each partner's participation is crucial to the program's success as a whole, therefore all partners have made a commitment to the Select Dealer Program.

The Select Dealer Partnership includes:

1. DSS- Digital Satellite Systems is a combination of Hughes Network Systems dishes and receivers, DirecTV and U.S. Satellite Broadcasting(SM) programming. This is a new business opportunity for Select Dealers.

2. Holmes Protection Group, Inc.- The partner providing UL Listed monitoring services and name recognition.

3. Richardson Electronics, LTD- The global distribution partner for the program.

4. Nests Security Inc.- The manufacturer of the Guardpost world's best-selling, self-contained, wireless 8-zone control panel, exclusively for United States Select Dealers.

Program Director Bill Nix states "This first of it's kind alliance offers the security dealer an opportunity to remain competitive in today's marketplace." **TNL**

KEY CODES

The HPC 1200CMB and
1200PCH code cards for
this code series are
between pages 118-121.

2001 Dodge Stratus F0001-F1571, Part 1

Manufacturer: Mitsubishi for Dodge

Code Series: F0001 - F1571

Key Blanks:

Ilco: Y160CHT-PT

Ilco EZ: Y158-NP

Jet: Y160C-PHT

Strattec: 599450 or 690226

Number of Cuts: 8

M.A.C.S.: 2

Key Gauged: Tip

Center of First Cut: .985

Cut to Cut Spacings: .083

Cut Depth Increments: .025

Spacings: 1 - .985, 2 - .902, 3 - .820, 4 - .737,
5 - .655, 6 - .572, 7 - .491, 8 - .407

Depths: 1 = .327, 2 = .302, 3 = .276, 4 = .251

HPC 1200CMB

Code Card: CF306

Jaw: A

Cutter: CW-1011

Gauge From: Tip

HPC 1200PCH (Punch)

PCH Card: PF306

Punch: PCH-1011

Jaw: A

HPC CodeMax

DSD #: 167

Jaw: A

Cutter: CW-1011

Curtis No. 15 Code Cutter

Cam-Set: DC-5

Carriage: DC-5A

Framon #2

Cuts Start at: .407

Cut to Cut Spacing: .0825

Block #: 5

Depth Increments: .0255

Cutter: FC9040

Key Clamping Info: Use tip stop.

F0001 23134213	F0033 43423432	F0065 24334243	F0097 23313322	F0129 24213322	F0161 42312133
F0002 32424343	F0034 43342423	F0066 23231242	F0098 34343431	F0130 22123342	F0162 42124211
F0003 42132331	F0035 22423123	F0067 42113332	F0099 24443422	F0131 34332442	F0163 33222313
F0004 42133231	F0036 42331123	F0068 31124313	F0100 34231312	F0132 22313242	F0164 21332323
F0005 24243433	F0037 31124331	F0069 12423322	F0101 21333223	F0133 43332442	F0165 23421313
F0006 22121131	F0038 44344312	F0070 13444243	F0102 31122121	F0134 24432433	F0166 13423231
F0007 12112433	F0039 34232122	F0071 44243323	F0103 31134232	F0135 13423213	F0167 42111242
F0008 12123121	F0040 42121121	F0072 34221331	F0104 34432243	F0136 12312121	F0168 42331222
F0009 21112312	F0041 12121312	F0073 42344233	F0105 12133423	F0137 44242243	F0169 31244211
F0010 23221333	F0042 42334423	F0074 34344313	F0106 21322423	F0138 24323443	F0170 43323442
F0011 44232343	F0043 24443323	F0075 13233421	F0107 22433443	F0139 11122213	F0171 44223433
F0012 12233323	F0044 34244422	F0076 44242333	F0108 12422323	F0140 21124211	F0172 24334342
F0013 31211212	F0045 11222311	F0077 34424323	F0109 43124443	F0141 43324342	F0173 43344232
F0014 22133323	F0046 12421333	F0078 22112311	F0110 23423113	F0142 42112421	F0174 11124423
F0015 12121123	F0047 31112221	F0079 31212121	F0111 42423343	F0143 43343242	F0175 34221313
F0016 33424432	F0048 22434433	F0080 13133422	F0112 24212111	F0144 13233223	F0176 24244243
F0017 32331232	F0049 24424333	F0081 31342231	F0113 44343223	F0145 11122231	F0177 11224211
F0018 34242343	F0050 13433443	F0082 13232422	F0114 42444313	F0146 44224423	F0178 13123423
F0019 23424442	F0051 12342331	F0083 32342131	F0115 24232231	F0147 44224432	F0179 23321242
F0020 33231322	F0052 44342422	F0084 11124212	F0116 23242321	F0148 42344332	F0180 24424342
F0021 24224211	F0053 22311211	F0085 43224442	F0117 22111312	F0149 34424422	F0181 31212211
F0022 44212421	F0054 34434313	F0086 21123112	F0118 12313342	F0150 24331211	F0182 42243442
F0023 11242112	F0055 21313423	F0087 33232123	F0119 22423213	F0151 13424443	F0183 33223231
F0024 43232443	F0056 43433431	F0088 12433311	F0120 12312112	F0152 34342423	F0184 22131112
F0025 33231223	F0057 23224213	F0089 23231323	F0121 44434222	F0153 12422421	F0185 31233223
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F0030 22332313	F0062 44243242	F0094 31242133	F0126 12134233	F0158 13421332	F0190 34344331
F0031 24434323	F0063 44232111	F0095 24211123	F0127 31121221	F0159 43424323	F0191 13434343
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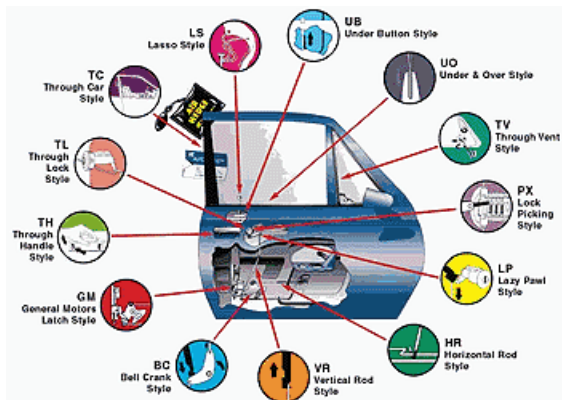
2001 Dodge Stratus F0001-F1571, Part 1

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F0194	32243443	F0222	31312431	F0250	13112122	F0278	21323323	F0306	21131212	F0334	22323331
F0195	12221131	F0223	22124233	F0251	44224243	F0279	13322242	F0307	42333121	F0335	21311221
F0196	13344343	F0224	44422423	F0252	31212112	F0280	13232323	F0308	31223332	F0336	24324433
F0197	22324231	F0225	43242433	F0253	12332323	F0281	33121133	F0309	44234332	F0337	44322433
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F0199	13423132	F0227	33423112	F0255	32223133	F0283	24223123	F0311	42133213	F0339	32322313
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F0202	34442422	F0230	31132431	F0258	42231331	F0286	31324311	F0314	34442242	F0342	31123342
F0203	44344222	F0231	43433242	F0259	43324243	F0287	32212342	F0315	23231233	F0343	13123342
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F0205	12111242	F0233	13243113	F0261	44424331	F0289	44343133	F0317	33444323	F0345	23242231
F0206	34211323	F0234	24432442	F0262	24242131	F0290	11242333	F0318	32442433	F0346	42113323
F0207	42442432	F0235	13421233	F0263	32124223	F0291	34323442	F0319	42231313	F0347	43244422
F0208	13423321	F0236	34334431	F0264	33211123	F0292	12423313	F0320	32123233	F0348	44223442
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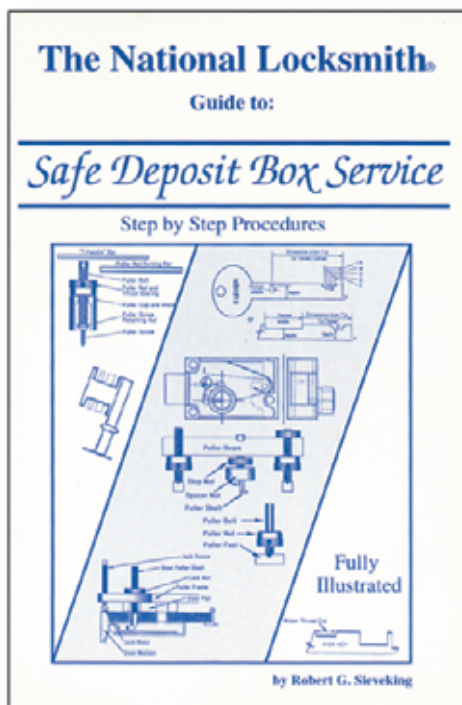


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2001 Dodge Stratus F0001-F1571, Part 1

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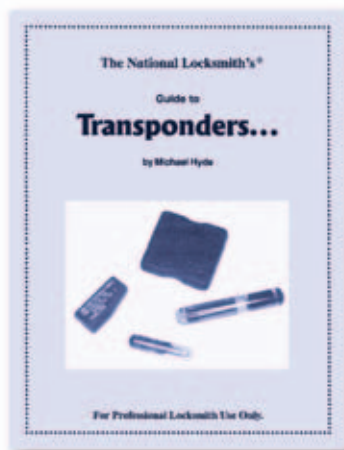


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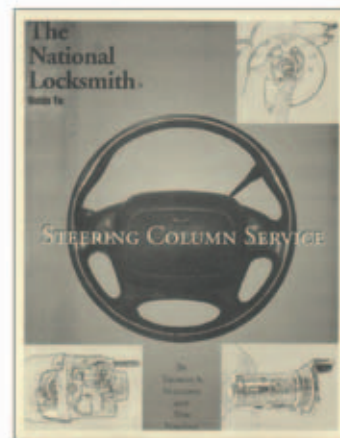
2001 Dodge Stratus

F0001-F1571, Part 1

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MDS Incorporated has been serving the locksmith industry for just about twenty years now with a variety of scopes and viewing equipment. Locksmiths often have to view into difficult to access situations such as drilled safes, door panels, and more.

In their web site, MDS shows a lot of charts with feature and price comparisons. They also provide photos of the equipment. These tools are almost like toys for locksmiths who find them not only useful, but also fun.

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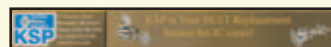
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TEST DRIVE!

While this product won't protect your client's safe from a drill bit, the Baffler by Gerry Forder, Safecrackers Unlimited, of Melbourne, Australia, is designed to thwart manipulation attempts of classic wheel drive combination locks either by hand or by computer controlled manipulation devices. This product is designed to be used on S&G (new); S&G 2000; La Gard 1800, 3300; Ilco; Steelsafe; and most other S&G 6730 footprint, 3-wheel combination locks. Currently, however, the manufacturer advises that this product is not suitable for the S&G zero change model lock.

DESIGN:

The Baffler is quite simple in design. After installation, the Baffler causes the manipulator of the lock (be it human or mechanical) to detect a contact point that never changes. By doing so, the detection of a wheel gate can not be determined.

FEATURES:

The Baffler kit includes the following:

- Two individual replacement mounting bolts to accommodate the most common thread sizes.
- A tubular baffler post.
- A detent spring.

The instruction sheet describes and illustrates a lock mounted in the vertical up position. The use of this product works on locks mounted in all other standard positions, but the installer will need to make a mental conversion of the installation technique. The easiest conversion method is to read the instructions to understand what is being described in the illustrations, then turn the installation sheet around to match the mounting of the lock. Installation is

so quick and simple, that after your first installation, you probably won't need the instruction sheet ever again.

INSTALLATION PROCEDURE:

The first step for installing the Baffler is to remove the back cover of the lock.

After identifying the lock mounting bolt, which must be removed, it is replaced with the Baffler kit. Identify the thread size of the mounting hole by sight or by seeing which of the new mounting bolts will screw into the lock mounting hole. Place the new mounting bolt over the detent spring and tubular baffler post and secure it into the mounting hole. This would be a good place to note that if the lock is an old S&G or Ilco lock, you will need to file about 1/16" off of the tubular baffler post, otherwise you will not be able to get the cover back on the lock.

Following the instruction sheet, you will find that the driver cam will need to be scribed or marked in relation to the drop-in points of the gate. At least the driver cam will need to be removed so that "V" notches, about 1/32" deep can be hand filed into it at the scribed lines. It will probably not be necessary to remove any of the combination wheels unless you are also doing cleaning and lubrication at the same time.

Upon reinstallation of the cam, the spring tension of the detent spring can be adjusted to a tension slightly heavier than the spring tension of the lever spring.

Put the cover back on the lock and check for proper operation. Your combination should not have changed if you only removed the drive cam. But check it three times anyway before closing the safe door. When the dial is turned to check the contact points, you shouldn't be able to feel them.

PRICE:

US \$28.00 for two.

COMMENTS:

In the event of a lock failure or lost combination, it will be time to get out the drill bits.

This tool is a great way to increase the security of your client's combination lock.

*Further information can be obtained though Gerry Forder, Safecrackers Unlimited, Melbourne, Australia.
E-mail: gfordr@bigpond.com.
Web: www.safecrackersunlimited.com
Circle 391 on Rapid
Reply. **TNL***



IN SUMMARY:

DESCRIPTION: The Baffler is designed to thwart manipulation attempts of mechanical combination locks.

PRICE: \$28.00 for two.

COMMENTS: It's easy to install and works.

TEST DRIVE RESULTS: A great way to increase mechanical combination lock security.